

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

DE-9J

Michael A. Savage, Chief  
Ohio Environmental Protection Agency  
Division of Hazardous Waste Management  
Lazarus Government Center  
P.O. Box 1049  
Columbus, Ohio 43216-1049

RE: Notice pursuant to Section 7003 of RCRA  
AK Steel, Middletown, Ohio  
EPA ID # OHD 004 234 480

Dear Mr. Savage;

This letter serves as notice that the United States Environmental Protection Agency is proposing to issue a unilateral Order under Section 7003(a) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973(a), to AK Steel Corporation (OHD 004 234 480) in Middletown, Ohio. The Order requires AK Steel take immediate actions to investigate and remediate conditions at the facility and in the adjacent Dick's Creek and unnamed landfill tributary related to PCB contamination of sediments, soils and groundwater that may present an imminent and substantial endangerment to human health and the environment.

Discussions have been ongoing between US EPA, (DOJ?) and numerous staff from the Ohio Attorney General's Office and Ohio Environmental Protection Agency Divisions of Surface Water and Hazardous Waste Management and Southwest District Office regarding the details of the required actions. Kimberly Rhodes provide consolidated written comments from OAG and OEPA on an earlier draft of the Order which we have addressed in this revised version. We believe a mutual understanding has been reached between the US EPA and OEPA regarding the technical provisions of this Order. Since this matter was brought to our attention by the OEPA, staff from the Southwest District Office have provided additional documents, participated in numerous conference calls, and accompanied US EPA staff on 2 site visits, including a sampling reconnaissance of Dick's Creek via canoes. We appreciate the support and technical advice of the staff to date. (including Harold O'Connell, Randy Bournique, Stephanie Simstad, Jeanette Smith, Diana Zimmerman, Mary Osika, John Spitler, John McGinnis, Bob Karl, Lori Massey and Kimberly Rhodes.) continued comments and technical.....

AK5 044118

We look forward to continuing our partnership with OEPA to address the potential threats to human health and the environment related to the AK Steel facility. If you have any questions regarding this matter, please feel free to contact me at (312) 886-4434, or Lisa Geist of my staff at (312) 886-0878. Thank you.

Sincerely,

Joseph M. Boyle, Chief  
Enforcement and Compliance Assurance Branch

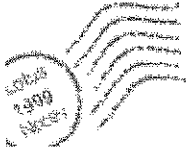
cc: Harold O'Connell, OEPA-SWDO

bcc: Robert Guenther, ORC  
Lisa Geist, WPTD

**ENFORCEMENT AND COMPLIANCE ASSURANCE BRANCH**

<b>SECRETARY</b>	SECRETARY	SECRETARY	SECRETARY	SECRETARY
AUTHOR/ TYPIST	COMPLIANCE SECTION 1 SECTION CHIEF	COMPLIANCE SECTION 2 SECTION CHIEF	CA SECTION SECTION CHIEF	ECAB BRANCH CHIEF

**AK5 044119**



Lisa Geist

05/22/00 04:57 PM

To: Robert Guenther/R5/USEPA/US@EPA  
cc: CatherineL Fox/R5/USEPA/US@EPA, Kris  
Vezner/R5/USEPA/US@EPA, Michael  
Mikulka/R5/USEPA/US@EPA  
Subject: AK Steel update

Enforcement confidential

Robert -

We had 2 conference calls regarding AK Steel today. This morning Mike and I met with DOJ (Rob Darnell and Pam Lee) and talked about the comments the State forwarded to us. In particular, we discussed the standards for cleanup of the Tributary and Dick's Creek. Based on the comments from the state, we are considering including additional language that contemplates a process to derive a cleanup number for Dicks' Creek (as opposed to including a potential arbitrary number in the Order). This process will probably include a transitionary step where AK Steel provides a risk assessment for EPA approval/review. However, we still firmly believe that remediation of the Tributary can begin immediately, without further study.

We also discussed the State's concern about offering to negotiate with AK Steel up front, before the order is issued. Based on the timeframes available this season for sampling and remediation, we feel that the unilateral order is still appropriate. We offered to include a paragraph in the reservation of rights section about consulting with OEPA.

DOJ also asked us about the status of the letter and memo regarding the CRL issues.

This afternoon we talked with DOJ, OAG, and OEPA staff. Kris Vezner listened in for the later part of the call (after the initial discussions of OEPA's role in the process). Overall, we feel we can address all of OEPA's technical comments in the order, and we are on the same page regarding the work necessary for the site. However, we appear to disagree with OAG (Bob Karl) regarding the role of OEPA in the 7003 order. It was decided that this issue will be elevated to upper management and policy makers of the two agencies. In particular, someone from the Director's Office of OEPA may call US EPA to discuss this further. Mike suggested they call Joe Boyle, since he is the signatory of the Order, or Bob Springer, our Division Director. OAG conveyed that they need to be involved with the process, do not have enforcement authority over the 7003 order, and want to find a way to remain involved in an official capacity. OAG also raised the issue of negotiating an agreed preliminary injunction with AK Steel for the sampling and monitoring requirements only. DOJ appear opposed to this idea and was not familiar with that type of proceeding.

We continued with more technical discussions regarding incorporation of risk assessment, guidance documents, interim versus long term measures, possible source areas of PCBs outside of the slag processing area, and broadening the order to incorporate "solid waste" in addition to PCBs, etc. We are working on ways to incorporate some of these issues.

Finally, we told the state that our timeframe was to incorporate their comments this week and have the order ready for signoff by the beginning of next week. We will need your concurrence on our final edits to the order.

Please let us know your availability to talk further about these conference calls. Thanks.

Lisa

AK5 044120








Lisa Geist

05/22/00 05:07 PM

To: Michael Mikulka/R5/USEPA/US@EPA  
cc:  
Subject: Re: AK Steel revised final report 

Mike

First page should be Diana Zimmerman, not Diane. (I changed it in the attached file). Also - what exhibit number should I use for the photos? It appears that the map from MCD is called Figure 2 and the USGS map is Exhibit 2, and the photos are called Exhibit 2. Or should the USGS map be Exhibit 1? Need to be consistent. I can make the cover sheet for the photos be whatever it needs to be...

I also started to mess with the spacing of the paragraphs (moved heading for Interview with Mark B to second page, also on page 5, I moved up the next paragraph - big blank space). Otherwise, it looks great.

Thanks

Lisa



Rept051100.


AK5 044121



Lisa Geist 04/13/2000 05:53 PM

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To: RDarnell, Robert Guenther cc: Michael Mikulka

Subject: RE: AK Steel 

Everyone,

I talked to Mark Osika today about the sediment sampling that's been done out at AK Steel. The only split samples that have been collected there were in 1996 (US EPA and AK Steel during the multimedia inspection), and June, 1999 (US EPA, AK Steel, and OEPA). The 1999 results are compared in the text of the referral. I was not previously aware of the 1996 U.S EPA results, but they have been requested by Mike. I don't know off hand what AK Steel's results were for that 1996 sampling. The 1999 US EPA sampling results have also been requested, but will probably not be available for some time yet. (Mike - please clarify if I'm wrong...)

In general, samples collected at different times, and especially during different years are not comparable, due to the dynamic nature of waterbodies, and the potential for constant sediment movement and resuspension. In addition, AK Steel may be missing hotspots of PCBs by not properly locating their sampling, and certainly by not sampling using sediment cores to obtain deeper samples. Depositional areas of the Creek must be sampled, especially downstream of the confluence of the Landfill Tributary, to determine where the PCBs are going. Any core samples should be divided into discrete segments, either by visual examination of the materials, or pre-defined depth intervals. Furthermore, it is nearly impossible to determine why 2 different labs (or even 3) obtain different results for so-called similar samples. Lab methods may be different, or the samples may contain small pockets of contamination, or different amounts of fine grained particle versus larger sized gravels. The sampling protocols matter more than the analyses, too. That is, how and where the samples are collected in the field, as opposed to what tests are run by the laboratory. It seems a bit pointless to argue with AK Steel about that data, when OEPA has been doing this for years with them.

It may be useful to have our RCRA contractors go out and collect additional sediment samples asap. We can request quick turn around on the samples and get results within a week, I would think. This effort wouldn't have to hold up drafting or even issuing an order, but could be useful in the future...

Also, we may want to include the more detailed sampling plan elements from OEPA draft consent order (Jan 1998) in whatever 7003 order we issue to AK. That document is in the appendices to the referral, and I used it as basis for the relief requested in the referral.

OK, that's all from me for now. See you on monday.

Lisa



## A. IMMEDIATE ACTIONS

1. Investigate alternatives and implement actions to further control the influence of the kish pot operation on ground water flow. These operations could include relocation of the kish pot operation managed by Olympic (formerly IMS) to another location on the facility, and further curtailment of water usage or other control of the operation. A pump in use in the area, which requires a constant flow to be primed, should be replaced immediately with a self-priming pump to decrease water use, and a permanent water recycle system should be installed to prevent the migration of the water used for air pollution control purposes into the ground water.
2. Continue to eliminate seepage of ground water contaminated with PCBs and/or other waste material to surface waters of the State in the area presently known (i.e. operate and maintain a system continuously to prevent seepage, and monitor the effectiveness of the installed trenching and interim treatment system, including filter condition and treated effluent water). Eliminate seepage to waters of the State in areas where it may occur in the future.
3. Prevent any treated water from entering surface water unless permitted and monitor water quality, at least quarterly, for possible impacts from seepage.
4. Inspect, at a minimum, the creek banks along Monroe Ditch and the area of Dick's Creek adjacent to the closed landfills, at least weekly, for evidence of seepage, or impacts from seepage, to surface waters (i.e., Dick's Creek and the landfill tributary/Monroe Ditch), and continue to inspect until the source of PCBs/waste material seepage is eliminated or remediated. If evidence of additional waste material seepage is noted, AK must conduct sampling to determine the effects of the seepage on surface waters. AK should record these inspections in a log and if any seepage is detected, immediately inform OEPA SWDO staff.
5. Conduct an investigation of biological and water quality conditions in Dick's Creek, including, but not limited to, the presence of PCB's in sediments and surface waters of Dick's Creek (from the confluence with the Great Miami River to upstream of all AK Steel outfalls) and the Landfill Tributary. Collect sampling information related to outfalls 002 and 003 and other upstream locations which are possible past or current sources of PCBs. A sediment sampling plan must be prepared in consultation with OEPA and U.S. EPA, with final approval by U.S. EPA. AK must conduct the sediment sampling according to U.S. EPA and OEPA approved quality assurance/quality control practices. AK must also collect and analyze core samples at the discrete intervals of 0-6 inches, 6-12 inches, and 12-18 inches in depth. Additional depths may be necessary depending on initial



results.

6. Remove and properly dispose of remnant sources of PCBs in soil from various locations at AK Steel, based on the results of the investigation conducted for AK by Arcadis Geraghty and Miller (e.g. soil in vicinity of SS-01, BH-15b, BH-07, BH-08, etc.), and any subsequent further characterization. Unless AK removes these sources of PCBs, precipitation and ground water may continue to transport them towards Monroe Ditch and Dick's Creek, where they may pose an imminent threat.
7. Remove and properly dispose of any sediments and adjacent river bank materials contaminated with levels of PCBs which pose an unacceptable risk, as determined by U.S. EPA, from the Landfill Tributary and Dick's Creek. The extent of contaminated sediment will be based on both historical results and results of the investigation outlined above. This effort should seek to remove the buildup of finer grained sediments and sediments located in depositional areas, as PCBs are known to adhere to finer grained particles.
8. Conduct a study of possible upstream sources of PCB, to the extent AK Steel denies that the PCB sediments are associated with its operations. AK personnel should sample all active outfalls at least 5 times and visually inspect the entire creek bank to ascertain and sample any other sources of discharge, including any newly identified seeps.

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note: the following items may be considered "long term" actions...

9. **Ground Water** - While investigation of the landfill area surrounding the Monroe Ditch is ongoing, additional work is necessary. AK should characterize ground water flows and their impact on PCB contamination. This characterization must identify seeps and potential paths for leachate. AK should prepare a work plan for additional work, submitting the plan to OEPA and U.S. EPA for review and approval. In particular, the plan should require AK to evaluate a northern flow path towards Dick's Creek to determine if PCB contamination in the slag processing area has caused the PCB contamination in Dick's Creek upstream of the confluence with the landfill tributary.

AK Steel must also investigate the western bank of the Monroe Ditch to determine if additional seeps are present or possible and what contribution the closed landfill cells may make to PCBs problems in the sediments.

10. **Sediment Sampling** - Subsequent to the initial removal action, AK Steel must conduct a comprehensive sediment sampling program to confirm the elimination of PCBs from the sediments of Monroe Ditch and Dick's Creek to acceptable





levels. AK should also sample areas considered free of PCBs to identify the nature and extent of sediment contamination in the surficial and deep sediments of the surrounding area - including upstream of the Facility in Dick's Creek, and upstream and downstream of the confluence with Dick's Creek in the Great Miami River. AK should conduct the sediment sampling according to U.S. EPA and OEPA approved quality assurance/quality control practices. AK must collect and analyze core samples at the discrete intervals of 0-6 inches, 6-12 inches, and 12-18 inches in depth. Depending on the results, additional depths may be necessary as well. Depending on the removal action implemented, AK may need to conduct sampling at additional sites.

AK Steel must submit for review and approval by U.S. EPA and OEPA a sediment sampling plan describing the proposed sampling locations, the sampling and analytical methods, the constituents subject to sampling and analysis, a schedule for implementation, and a QA/QC plan. Within 90 days after work is completed, AK must prepare and submit for review and approval a final report on the sediments. Any consent decree should include a provision for additional removal activities if later sampling results show PCBs are still present in certain areas.

11. **Fish Tissue Sampling** - AK Steel must sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and tributaries through an Ohio EPA approved sampling and analysis plan (Fish Tissue SAP)--by July 30, 2001 and annually thereafter through the year 2011 for the presence of and any impacts from waste materials, e.g., PCBs, PAHs/BNAs, and heavy metals. AK must submit reports to OEPA of their of annual evaluations, within 90 days of completion of its work. This report and plan will be subject to modification, amendment, and or revision based on changed conditions or new information.
12. **Effluent reuse** - AK must rectify the high pH (pH of 12) in groundwater in the slag processing area. At least a portion of this flow currently emerges at the PCB treatment system, which does not stabilize the pH of the ground water. There is a strong possibility that this highly basic water, even if not contaminated with PCBs could affect the surface water near the site. AK Steel must assess whether the practice of reuse of the effluent from the slag processing operations (e.g. dust control, etc.) results in (a) concentration of PCBs or other waste materials in soil or other media at the site, or (b) poses a risk of runoff to any surface waters. AK must prevent this effluent from entering any waters of the State, unless permitted in accordance with State or Federal laws.
13. **Surface Water** - AK Steel must conduct instream biological monitoring of the Great Miami River (appropriate to AK's outfalls), Dicks Creek and tributaries,



through an Ohio EPA approved sampling and analysis plan (Aquatic Life SAP)--by July 30, 2001 and annually thereafter through the year 2011. These activities must include:

- i. evaluation of the attainment status of aquatic life uses and health of aquatic environment based on biological criteria provided by Ohio Adm. Code 3745-1-07, table 7-14--Index of Biotic Integrity (IBI) (based on fish communities), the Modified Index of Well-Being (MIWB) (based on fish community health characteristics), Invertebrate Community Index (ICI) (based on macro invertebrate communities), and
- ii. evaluation, simultaneously with each annual aquatic life attainment status evaluation, the aquatic habitat of Dick's Creek in accordance with the Qualitative Habitat Evaluation Index (QHEI). Reports of annual evaluations must be submitted to U.S. EPA and Ohio EPA.

### **C. ELEMENTS OF IRREPARABLE HARM**

Removal of any sediments containing PCBs which may present an imminent and substantial endangerment to human health and the environment. PCBs are present in the sediments of the Landfill Tributary and Dick's Creek which exceed conservative risk screening levels. In 1996, moderately elevated levels of PCB compounds were detected in a channel catfish fillet (620 ug/kg) collected from Dick's Creek at RM 1.4 (downstream of several AK Steel outfalls) and slightly elevated levels of PCB compounds were detected in a common carp fillet (220 ug/kg). Seeps emanating from property owned by AK Steel and identified by OEPA in November, 1997 prompted the Ohio Department of Health to issue a fish advisory for Dick's creek warning people not to eat any fish from its waters. An additional seep was discovered in November, 1998, which prompted OEPA to request the Middletown and Butler County Health Departments to post additional signs along the creek which state: "UNSAFE WATER DO NOT SWIM BATHE DRINK OR FISH".

The observed trends of apparent declining PCB concentrations at the confluence of Dick's Creek with the Landfill Tributary indicate that the contaminated sediments are moving downstream, and contributing to a potentially ubiquitous PCB problem that may become impossible to remediate in a feasible manner. The nature of PCBs is such that they are hydrophobic and adhere to small particles in the water column and sediments. Sediments in a water body tend to accumulate in slow moving, depositional areas and their distribution is often patchy and heterogenous. Therefore, sampling results obtained at varying time periods or even in similar locations cannot necessarily be compared due to the dynamic nature of water bodies, the constant resuspension and movement of sediment downstream, and the possibility of flood or other catastrophic events that flush buried sediments downstream.



AK Steel must conduct an investigation to further delineate both the surficial and subsurface sediment depositional areas in the Landfill Tributary and Dick's Creek (from the confluence of the Great Miami River to upstream of the AK Steel facility) containing PCBs which pose unacceptable risks. Buried sediments are always subject to mixing, stirring, resuspension, and redistribution in the waterbody due to factors such as weather events. Therefore, the potential for future exposure will persist until remedial actions are taken to address the accumulated contaminated sediment deposits.

The continued flushing of groundwater from the slag processing area to Dick's Creek and/or the Landfill Tributary must be stopped. The current trench system must continue to be operated, and its adequacy must be evaluated to ensure that the entire plume of contaminated groundwater is being intercepted. The potential additional groundwater flow pathways in the slag processing area must be investigated and any discharge into surface waters curtailed.

### **7003 ELEMENTS**

U.S. EPA may issue an Administrative 7003 Order either unilaterally or on consent. A recently issued unilateral order (see Rouge Steel Company, Docket Number R7003-5-00-001, March 1, 2000) by Region 5 included a standard section which states:

#### **XV. OPPORTUNITY TO CONFER AND MODIFICATION**

- A. Respondent has the opportunity to confer informally with EPA concerning the terms and applicability of this Order. If Respondent desires a conference, Respondent must contact EPA Region 5 to schedule such a conference within three (3) calendar days of receipt of this Order.
- B. If EPA determines that any element of this Order, including work to be performed or schedules, warrants modification after a conference is held, EPA will modify the Order in writing, file the modification with the Regional Hearing Clerk and issue a copy to Respondent.
- C. Except as otherwise provided in this Order, no modification to this Order shall be effective unless and until it is issued in writing by EPA and filed with the Regional Hearing Clerk.

An Administrative 7003 order which is issued on consent is subject to a 30 day public comment period. See pg 94 of RCRA Statute, section 7003(d) .



**EXAMPLES OF AK STEEL'S POLLUTION PREVENTION  
ACHIEVEMENTS SINCE 1987**

<b>WASTE MATERIAL</b>	<b>POLLUTION PREVENTION METHODOLOGY</b>
South Terminal Treatment Plant Sludge	Implementation of a proprietary process that significantly reduced the quantity of sludge generation by means of enhancing treatment efficiency.
No. 2 Electro galvanizing Treatment Plant – All Sludges	Same as above.
No. 2 Electro galvanizing Treatment Sludge – Zinc Sludge	Marketed to zinc reclaimer/supplier.
No. 2 Electro galvanizing Treatment Sludge – Zinc/Nickel Sludge	Marketed to off-site nickel reclaimer/supplier.
Roll Shop Blasting Grit & Lathe Turnings	100% recycled for metal value.
Hamilton Blast Furnace Sludge & Dust (200,000 Ton)	Recycled at Middletown Works.
Blast Furnace Dust – Catcher Dust	Recycled on-site.
Terne, Aluminum, Zinc Drosses	Sold as product or raw material substitute.
Parts Cleaning Solvent – Usage & Waste Generation	34% reduction in usage and waste generation.
Spent Pickle Liquor	28% reduction in waste generation.
Tecryl (Petroleum Product) Hazardous Waste	Elimination by raw material substitution.
Chlorinated Solvents	Elimination by-product substitution except in specially approved situations.
Basic Oxygen Furnace Refractory Waste	75% reduction in usage/waste generation realized by operational changes.
Conveyor Belting	Sold as product substitute.
Tar & Tar-Like Materials (often Hazardous Waste)	Managed and reused to the extent practical.
Mixed Slab Furnace Waste	Reduction of landfill material by separating waste, refractory and scale.
No. 2 Electro galvanizing Line Waste Electrolyte	Reduced corrosive hazardous waste by 95% with installation of an evaporator to re-use material. (\$5 million project).







U.S. Department of Justice

Environment and Natural Resources Division

90-5-2-1-2189

Environmental Enforcement Section  
P.O. Box 7611  
Washington, DC 20044-7611

Telephone (202) 305-2775  
Facsimile (202) 616-6584

VIA FEDERAL EXPRESS

March 23, 2000

J. Jeffrey McNealey  
Christopher R. Schraff  
Porter Wright Morris & Arthur  
41 South High Street  
Columbus, Ohio 43215-6194

For Settlement Discussions Only

RELEASED  
DATE 12/4/18  
RIN # 2018-00464  
INITIALS JFW

Re: AK Steel Corporation

Dear Messrs McNealey and Schraff:

As you know, both the United States Environmental Protection Agency ("U.S. EPA") and the Ohio Environmental Protection Agency ("Ohio EPA") have documented serious environmental violations at your client AK Steel Corporation's plant in Middletown, Ohio. These violations have resulted in referrals for potential civil action to both the United States Department of Justice and to the Ohio Attorney General's Office. In an effort to resolve these claims without litigation, the United States and the state of Ohio are jointly contacting you.

Attached to this letter are consolidated lists of environmental claims documented by the United States and by the state of Ohio organized by environmental media. Each of these lists includes the penalty amount and the mitigation activities which staff level personnel are prepared to recommend to management in order to settle this matter.<sup>1/</sup> Please be prepared to discuss these claims, and the relief and penalties being sought, at our negotiating session in Columbus, Ohio on April 11, 2000.

Sincerely,

Assistant Attorney General  
Environmental and Natural  
Resources Division

*Pamela R. Lee*  
Pamela R. Lee  
Trial Attorney

cc: Kimberly A. Rhoads (Ohio AG)  
Robert J. Karl (Ohio AG)  
Kris Vezner (U.S. EPA)  
Robert Guenther (U.S. EPA)

<sup>1/</sup> Any settlement is conditioned on agreement on all terms in a written agreement and subject to the approval of high-level officials of the Department of Justice, U.S. EPA, and, where applicable, the state of Ohio.

ATTACHMENT A  
CLEAN WATER ACT

I. CLAIMS

- A. Daily and monthly numerical limits of National Pollutant Discharge Elimination ("NPDES") permit OH0009997 (Section 301(a) of the CWA, 33 U.S.C. § 1311(a)) (see attached tables).
- B. Narrative standards of NPDES permit OH0009997 (Section 301(a) of the CWA, 33 U.S.C. § 1311(a)) (see attached tables).
- C. Pretreatment requirements of Section 307 of the CWA, 33 U.S.C. § 1317, and implementing regulations (see attached tables).
- D. Unpermitted discharges of PCBs, VOCs and PAHs.
- E. Section 504 of the CWA, 33 U.S.C. § 1364.

II. PENALTIES

\$2,400,000<sup>1/</sup>

III. MITIGATION

Injunctive relief will parallel Section 7003 of RCRA. In addition, AK Steel has agreed to conduct a study of the impacts to the Great Miami River and Dicks Creek during the 2000 sampling season (6/15/00 - 10/15/00) with oversight of OEPA.

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<sup>1/</sup> This penalty figure does not incorporate any groundwater violations, which, if warranted, will be assessed under ORC Chapter 6111.

### TABLES OF DAILY AND MONTHLY EXCEEDANCES

Bold = Joint State and Federal

Regular = Federal only

Italics = State only

#### OUTFALL 1ID00001001

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
<i>03/12/92</i>	<i>Zinc</i>	<i>24.08 kg/day</i>	<i>33.48 kg/day</i>	

#### OUTFALL 1ID00001003

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
<i>09/8/94</i>	<i>pH</i>	<i>9.0 S.U.</i>	<i>9.31 S.U.</i>	
<i>09/6/95</i>	<i>Free From</i>	<i>Free From</i>	<i>Rust Color</i>	

#### OUTFALL 1ID00001002

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
<b>12/5/95</b>	<b>pH</b>	<b>6.5 - 9.0 SU</b>	<b>6.3 SU</b>	–
<b>12/21/95</b>	<b>pH</b>	<b>6.5 - 9.0 SU</b>	<b>11.5 SU</b>	–
<b>6/7/95</b>	<b>Cyanide Free</b>	<b>0.046 mg/l</b>	<b>0.122 mg/l</b>	<b>165.22</b>
6/13/95	Cyanide Free	0.046 mg/l	0.049 mg/l	6.52
5/10/95	Cyanide Free	0.046 mg/l	0.056 mg/l	21.74
4/12/95	Cyanide Free	0.046 mg/l	0.057 mg/l	23.92
8/23/95	Cyanide Free	0.046 mg/l	0.089 mg/l	93.48

1/25/94	Cyanide Free	0.046 mg/l	0.060 mg/l	30.43
1/26/94	Cyanide Free	0.046 mg/l	0.76 mg/l	1552.17
2/15/94	Cyanide Free	0.046 mg/l	0.127 mg/l	176.08
10/6/98	Nitrogen-Ammonia	11.8 mg/l	22.2 mg/l	88.13
10/6/98	Nitrogen-Ammonia	44.2 kg/d	107.5 kg/d	143.21
10/7/98	Nitrogen-Ammonia	11.8 mg/l	20.4 kg/d	72.88
10/7/98	Nitrogen-Ammonia	44.2 kg/d	114.6 kg/d	159.28
10/8/98	Nitrogen-Ammonia	11.8 mg/l	18.0 mg/l	52.54
10/8/98	Nitrogen-Ammonia	44.2 mg/l	86.5 kg/d	95.70
10/14/98	Nitrogen-Ammonia	11.8 kg/d	15.7 mg/l	33.05
10/14/98	Nitrogen-Ammonia	44.2 kg/d	88.1 kg/d	43.90
10/15/98	Nitrogen-Ammonia	44.2 kg/d	65.7 kg/d	48.64
3/29/99	pH	6.5 - 9.0 S.U.	3 S.U.	-

OUTFALL 1ID00001005

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
12/27/96	Zinc Total	1.36 kg/day	1.43 kg/day	5.14

12/17/96	Residue, Total nflt	682 kg/day	920 dg/day	
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OUTFALL 1ID00001005

(MONTHLY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
12/96	Zinc Total	135 ug/l	162 ug/l	20.00
11/95	Zinc Total	135 ug/l	234 ug/l	73.33
01/96	Zinc Total	135 ug/l	188.75 ug/l	40.00
12/94	Zinc Total	135 ug/l	187 ug/l	38.5
12/96	Residue Total	227 kg/d	279 kg/d	
12/96	Zinc loading	.45 kg/d	.50 kg/d	
1/97	Zinc loading	135 kg/d	146 kg/d	

OUTFALL 1ID00001011

(DAILY VALUE)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
10/23/96	Cyanide-Free	0.97 kg.	3.13 kg.	222.68
11/12/96	Cyanide-Free	0.97 kg	2.33 kg	140.20
11/26/96	Cyanide-Free	0.97 kg	2.86 kg.	194.84
8/27/96	Cyanide-Free	0.97 kg.	1.91 kg.	96.90
12/13/95	Cyanide-Free	0.97 kg.	6.28 kg.	547.42
12/28/95	Cyanide-Free	0.97 kg.	2.97 kg.	206.18
5/2/95	Cyanide-Free	0.97 kg	1.97 kg.	103.09
4/5/95	Cyanide-Free	0.97 kg.	1.03 kg.	6.18

2/2/95	Cyanide-Free	0.97 kg.	1.13 kg.	19.58
1/24/95	Cyanide-Free	0.97 kg.	3.43 kg.	253.60
11/16/94	Cyanide-Free	0.97 kg.	1.08 kg.	11.34
11/22/94	Cyanide-Free	0.97 kg.	3.30 kg.	240.20
8/3/94	Cyanide-Free	0.97 kg.	1.63 kg.	68.04
6/29/94	Cyanide-Free	0.97 kg.	1.16 kg.	19.58
7/12/94	Cyanide-Free	0.97 kg.	1.29 kg.	32.98
7/26/94	Cyanide-Free	0.97 kg.	1.25 kg.	28.86
5/10/94	Cyanide-Free	0.97 kg.	1.67 kg.	72.16
8/25/93	Oil & Grease	10 mg/l	21 mg/l	110.00
8/6/98	Cyanide-Free	0.97 kg.	4.87 kg.	402.06
8/30/98	Cyanide-Free	0.97 kg.	2.95 kg.	204.12
9/23/98	Cyanide-Free	0.97 kg.	4.55 kg.	369.07
9/24/98	Cyanide-Free	0.97 kg.	4.80 kg.	394.84
5/9/99	Cyanide-Free	0.97 kg.	7.85 kg.	709.79
12/02/92	Cyanide-Free	0.97 kg/day	1.4 kg/day	
07/11/95	Cyanide-Free	0.97 kg/day	2.78 kg/day	
10/24/95	Cyanide-Free	0.97 kg/day	9.12 kg/day	
06/18/96	Cyanide-Free	0.97 kg/day	2.47 kg/day	
12/10/96	Cyanide-Free	0.97 kg/day	14.8 kg/day	
1/28/98	Cyanide-Free	0.97 kg/day	3.92 kg/day	
9/25/98	Cyanide-Free	0.97 kg/day	3.94 kg/day	

OUTFALL 11D00001011

(MONTHLY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
8/96	Cyanide-Free	0.27 kg./day	0.59 kg./day	118.51
10/96	Cyanide-Free	0.27 kg./day	1.01 kg/day	274.07
11/96	Cyanide-Free	0.27 kg./day	1.39 kg./day	414.81

2/96	Cyanide-Free	0.27 kg./day	0.382 kg./day	41.48
6/96	Cyanide-Free	0.27 kg/day	0.77 kg./day	185.18
12/95	Cyanide-Free	0.27 kg./day	4.42 kg./day	1537.03
4/95	Cyanide-Free	0.27 kg./day	0.98 kg./day	281.48
5/95	Cyanide-Free	0.27 kg./day	1.61 kg./day	496.29
2/95	Cyanide-Free	0.27 kg./day	1.14 kg./day	322.22
1/95	Cyanide-Free	0.27 kg./day	3.36 kg./day	1144.44
11/94	Cyanide-Free	0.27 kg./day	2.02 kg./day	648.14
8/94	Cyanide-Free	0.27 kg./day	1.62 kg./day	500.00
10/94	Cyanide-Free	0.27 kg./day	0.64 kg./day	137.77
7/94	Cyanide-Free	0.27 kg./day	1.28 kg./day	375.31
5/94	Cyanide-Free	0.27 kg./day	1.79 kg./day	563.74
12/92	Cyanide-Free	0.27 kg/day	.39 kg/day	
10/95	Cyanide-Free	0.27 kg/day	2.3 kg/day	
12/96	Cyanide-Free	0.27 kg/day	3.71 kg/day	

OUTFALL 11D00001015

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
06/17/98	Zinc, Total Rec.	1.2 kg/ day	9.31 S.U.	
6/2/99	Free From	Free From	Solids	

## OUTFALL 1ID00001099

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
01/26/94	Cyanide-Free	0.96 kg.	3.41 kg.	255.20
01/26/94	Cyanide-Free	0.046 mg/l	0.09 mg/l	95.65

## OUTFALL 1ID00001613

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
12/13/95	Cyanide Total	13.7 kg.	17.06 kg.	24.52
12/3/95	Nitrogen-Ammonia	410 kg.	498.2 kg.	21.51
8/2/95	Phenol-4AAP-Total	1.8 kg.	2.12 kg.	17.77
2/14/95	Phenol-4AAP-Total	1.8 kg.	2.64 kg.	46.66
12/13/94	Phenol-4AAP-Total	1.8 kg.	3.20 kg.	77.77
6/22/94	Phenol-4AAP-Total	1.8 kg.	2.65 kg.	47.22
5/11/94	Phenol-4AAP-Total	1.8 kg.	2.12 kg.	17.77
2/24/94	Phenol-4AAP-Total	1.8 kg.	2.16 kg.	20.00
02/13/92	Ammonia	410 kg/day	419 kg/day	
02/26/92	Phenol	1.8 kg/day	2.1 kg/day	
03/12/92	Ammonia	410 kg/day	539 kg/day	
04/2/93	Phenolic, 4AAP	1.8 kg/day	3.1 kg/day	
04/7/93	Phenolic 4AAP	1.8 kg/day	3.0 kg/day	
04/14/93	Phenolic, 4AAP	1.8 kg/day	3.2 kg/day	
05/27/93	Phenolic, 4AAP	1.8 kg/day	14.0 kg/day	
03/16/94	Phenolic 4AAP	1.8 kg/day	1.847 kg/day	



## OUTFALL 1ID00001613

(MONTHLY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
9/95	Nitrogen-Ammonia	205 kg./day	258.36 kg./day	20.65
8/95	Nitrogen-Ammonia	205 kg./day	222.51 kg./day	8.37
7/95	Nitrogen-Ammonia	205 kg./day	265.08 kg./day	29.30
1/95	Nitrogen-Ammonia	205 kg./day	226.42 kg./day	10.45
9/94	Nitrogen-Ammonia	205 kg./day	229.95 kg./day	12.17
10/94	Nitrogen-Ammonia	205 kg./day	233.22 kg./day	13.76
2/95	Phenol-4AAP-Total	.9 kg./day	1.26 kg./day	40.00
3/94	Phenol-4AAP-Total	.9 kg./day	1.21 kg./day	34.55
4/93	Phenolic 4AAP	.9 kg/day	1.9 kg/day	
5/93	Phenolic 4AAP	.9 kg/day	3.8 kg/day	
12/94	Phenolic 4AAP	.9 kg/day	.927 kg/day	

## OUTFALL 1ID00001631

(DAILY VALUES)

DATE	PARAMETER	PERMIT VALUE	REPORTED VALUE	PERCENT EXCEEDANCE
9/02/94	Zinc Total	3.89 kg.	5.22 kg.	33.93
12/22/94	Zinc	3.89 kg/day	7.60 kg/day	

## OUTFALL 1ID00001631

(MONTHLY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
12/94	Zinc Total	1.30 kg./day	2.17 kg./day	66.92
11/94	Zinc Total	1.30 kg./day	1.92 kg./day	47.62
9/94	Zinc Total	1.30 kg./day	1.90 kg./day	46.15

10/94	Zinc Total	1.30 kg./day	1.44 kg./day	10.76
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OUTFALL 1ID00001642

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMITS	REPORTED VALUE	PERCENT EXCEEDANCE
01/09/96	Zinc Total	2610 ug/l	3020 ug/l	15.70
02/02/94	Residue-Total Nonfilterable	60 mg/l	230 mg/l	283.33
11/17/93	Residue-Total Nonfilterable	60 mg/l	153 mg/l	155.00
04/04/95	Nickel-Total	3980 ug/l	9700 ug/l	143.72
02/13/92	Residue, T, NFR	60 mg/l	715 mg/l	
02/13/92	Zinc	2810 ug/l	17900 ug/l	
08/26/92	Residue, T, NFLT	80 mg/l	429 mg/l	
02/2/94	Residue, T, NFLT	60 mg/l	230 mg/l	
05/4/94 05/12/94 05/12/94	Flow	0.288 MGD	exc. 3 days	
07/9/95	Flow	0.288 mgd	.307 mgd	
07/11/95	Flow	0.288 mgd	.301 mgd	
07/17/95	Flow	0.288	.304 mgd	
09/15/95	Flow	0.288	.900 mgd	
09/12/95	Flow	0.288	.298 mgd	
09/8/95	Flow	0.288	.297 mgd	
09/17/95	Flow	0.288	.293 mgd	
09/21/95	Flow	0.288	.292 mgd	

09/23/95	Flow	0.288	.290 mgd	
09/6/95	Flow	0.288	.319 mgd	
09/7/95	Flow	0.288 mgd	.314 mgd	
04/21/93	Zinc	2610 ug/l	3850 ug/l	
04/2/93 04/3/93 04/4/93 04/6/93	Flow	.288 MGD	exc. 4 days	
02/10/98	Zinc	2610 ug/l	146000 ug/l	
10/8/97	Zinc Total	2610 ug/l	28000 ug/l	

OUTFALL IID0001642

(MONTHLY VALUES)

DATE	PARAMETER	PERMIT VALUES	REPORTED VALUE	PERCENT EXCEEDANCE
01/96	Zinc Total	1480 ug/l	2615 ug/l	76.68
02/94	Residue-Total Nonfilterable	31 mg/l	62 mg/l	100.00
11/93	Residue-Total Nonfilterable	31 mg/l	56.5 mg/l	82.25
2/92	Residue	31 mg/l	91 mg/l	
2/92	Zinc	1480 ug/l	5153 ug/l	
8/92	Residue, T. NFLT	31 mg/l	110 mg/l	
4/95	Nickel, Total	2380 ug/l	2492 ug/l	
2/98	Zinc	1480 ug/l	36975 ug/l	

## OUTFALL #100-01

(DAILY VALUES)

DATE	PARAMETER	PERMIT LIMIT	REPORTED VALUE	PERCENT EXCEEDANCE
06/09/96	pH	5.0 - 10.0 S.U.	10.4 S.U.	-
4/29/96	pH	5.0 - 10.0 S.U.	10.08 S.U.	--
4/30/96	pH	5.0 - 10.0 S.U.	3.78 S.U.	--
4/01/96	pH	5.0 - 10.0 S.U.	11.0 S.U.	--
12/28/95	pH	5.0 - 10.0 S.U.	10.82 S.U.	-

**SPILL EVENT TABLE**

Bold = Joint Federal and State

Regular = State only

OEPA ID #	DATE	SPILL DESCRIPTION	AMOUNT SPILLED & WATERWAY AFFECTED	NPDES PERMIT CLAIMS
8812-09-4034	11/15/88 to 12/1/88	An unknown amount of lube oil was left over in cooling tower as a result of a spill on 11/15/88. The left over oil blew down (spilled) into a lagoon on 12/1/88.	Unknown amount <ul style="list-style-type: none"> <li>• to lagoon</li> <li>• outfall</li> <li>• to Dicks Creek (light sheen was observed)</li> </ul>	OAC 3745-1-04(B) Part III.2.B and III.11
8905-09-1813	5/22/89	Waste water containing organics and cyanide spilled as a result of pump failure.	2,000 gallons <ul style="list-style-type: none"> <li>• outfall</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
8909-09-3631	9/15/89	A twenty foot section of pipe from pit to treatment plant was shut down because of a crack in the pipe. The pit overflowed spilling zinc.	Unknown amount <ul style="list-style-type: none"> <li>• to Great Miami River</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
8911-09-4449	11/21/89	During the emergency replacement of flange at treatment station 614, pumps were shut down. A pit overflowed spilling wastewater.	6,000 gallons <ul style="list-style-type: none"> <li>• to Great Miami River</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
9001-09-0256	1/18/90	Due to equipment failure, "flushing liquor," containing ammonia hydroxide, benzene, phenolics, zinc, lead, selenium spilled through storm sewer to Dicks Creek.	30,000 gallons spilled total, only 8,000 gallons spilled to <ul style="list-style-type: none"> <li>• storm sewer</li> <li>• to outfall</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11

9008-09-4112	8/22/90	Waste acid went to the 614 treatment facility but was lost there. The waste acid spilled into the Great Miami River.	5, 000-6,000 gallons <ul style="list-style-type: none"> <li>• to Great Miami River</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
9103-09-0715	3/8/91	Due to equipment failure, wastewater was spilled into Dicks Creek.	Unknown amount <ul style="list-style-type: none"> <li>• to outfall 003</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
9107-09-2782	7/9/91	A process line was shut down for repairs. The remaining decanters could not handle the flow of the system and "flushing liquor" overflowed and spilled.	>25,000 gallons <ul style="list-style-type: none"> <li>• to storm sewers &amp; lagoon</li> <li>• to outfall 002</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
9111-09-4723	11/6/91	A fire hose ruptured allowing water to enter oil recovery pit. The waste oil pit overflowed and spilled.	500 - 1,000 gallons <ul style="list-style-type: none"> <li>• to storm sewer</li> <li>• to outfall 001</li> <li>• to Great Miami River</li> </ul>	OAC 3745-1-04(B) Part III.2.B. and Part III.11
9206-09-2729	6/27/92	"Flushing liquor" overflowed and spilled for 1.5 hours due to damaged equipment.	Unknown Amount <ul style="list-style-type: none"> <li>• to storm sewer</li> <li>• to outfall 003</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
9206-09-2760	6/29/92	Tributletin oxide tainted water was lost and spilled. Tributletin oxide is a microbiocide used to kill bacteria on the nozzles in the wastewater treatment plant.	Approximately 1 million gallons <ul style="list-style-type: none"> <li>• to outfall 005</li> <li>• to Dicks Creek</li> <li>• 10,811 fish were killed</li> </ul>	OAC 3745-1-04(D) Part III.2.D. and Part III.11
9207-09-2910	7/9/92	Spill resulted from a bypass caused by a pump failure. Wastewater spilled into Dicks Creek.	Unknown amount <ul style="list-style-type: none"> <li>• outfall</li> <li>• to Dicks Creek</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9212-09-5291	12/19/92	Spill resulted from a bypass caused by a tank overflow. Rinse water spilled into Dicks Creek.	400 gallons <ul style="list-style-type: none"> <li>• to outfall 004</li> <li>• to Dicks Creek</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9212-09-5340	12/25/92	Wastewater spilled due to a bypass.	Unknown amount <ul style="list-style-type: none"> <li>• to storm sewer</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9212-09-5339	12/27/92	Wastewater spilled due to a bypass.	Unknown amount <ul style="list-style-type: none"> <li>• to storm sewer</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9302-09-0564	2/15/93	Spent pickle liquor was spilled to a ditch.	4,000 gallons to drainage ditch	NPDES Permit Part III, #11
9304-09-1520	4/23/93	Wastewater spilled when pipe to	Unknown amount	NPDES Permit Part

		wastewater treatment plant was being repaired.	<ul style="list-style-type: none"> <li>to Great Miami River</li> </ul>	III, #11; ORC 6111.07
9305-09-2007	5-22-93	Sulfuric acid spilled to plant sewers during power outage and north terminal treatment bypassed.	8,300 gallons <ul style="list-style-type: none"> <li>to outfall</li> <li>to Great Miami River</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9306-09-2583	6/26/93	Sulfuric acid spilled because of a leak in drain valve on the sulfuric acid tank in coke plant.	Unknown amount <ul style="list-style-type: none"> <li>to outfall 002</li> <li>to Dicks Creek</li> </ul>	6111.04; 6111.07 Part III.11
9308-09-3358	8/11/93	Pickle liquor spilled when transferring from AGST to a tank truck. Pickle liquor entered storm sewer.	Approximately 100 gallons <ul style="list-style-type: none"> <li>to storm sewer</li> <li>to ditch\</li> </ul>	6111.04; 6111.07
9408-09-3569	8/9/94	Untreated contact cooling water was diverted to a sump area due to a malfunction in the system. This water was then pumped from the sump through a tanker to a storm drain which empties into Outfall 003 to Dicks Creek.	At least 100,000 gallons <ul style="list-style-type: none"> <li>to outfall 003</li> <li>to Dicks Creek</li> </ul>	NPDES Permit Part III, #11 and III.2.C; ORC 6111.07
9408-09-3648	8/13/94	Sodium hydroxide/noncontact cooling water spilled into storm drain overnight.	10-15 gallons <ul style="list-style-type: none"> <li>to storm sewer</li> <li>outfall</li> <li>to Dicks Creek</li> </ul>	6111.04; 6111.07 Part III.11
9507-09-3129	7/26/95	Flushing liquor from the coke operation overflowed from a overhead reservoir due to a tar build-up in the lines. The spill went to a containment pad which overflowed and discharged to a sump which pumped the liquor to the storm sewer and into outfall 003.	9,200 gallons <ul style="list-style-type: none"> <li>to storm sewer</li> <li>to outfall 003</li> <li>to Dicks Creek</li> <li>12,713 fish were killed</li> </ul>	OAC 3745-1-04(D) Part III.2.D and Part III.11
9509-09-3781	9/6/95	Dark red wastewater/storm water (iron ore) was discharged, reason unknown.	Unknown amount <ul style="list-style-type: none"> <li>to lagoon</li> <li>to outfall 003</li> <li>to Dicks Creek</li> </ul>	OAC 3745-1-04(C) Part III.2.A and C
9512-09-5037	12/21/95	Caustic sodium hydroxide leaked from above-ground tank in coke plant area.	50 gallons <ul style="list-style-type: none"> <li>to storm sewer</li> <li>outfall</li> <li>to Dicks Creek</li> </ul>	6111.04; 6111.07 Part III.2.D. and III.11
9603-09-0872	3/7/96	Spill resulted from storm water runoff or scouring of outfall pipe because of high river levels. Oil/hydrocarbon sheen was observed.	Unknown amount <ul style="list-style-type: none"> <li>to outfall 011</li> <li>to Great Miami River</li> </ul>	OAC 3745-1-04(B) Part III.2.B. and III.11

9703-09-1088	3/20/97	Spill resulted because of quenching water bypass due to break in line.	Unknown amount <ul style="list-style-type: none"> <li>• to storm sewer</li> <li>• to outfall 002</li> </ul>	NPDES Permit Part III, #11; ORC 6111.07
9704-09-1534	4/22/97	Spent Pickle Liquor spill	Unknown amount <ul style="list-style-type: none"> <li>• to outfall 004</li> <li>• to Dicks Creek at outfall 002</li> </ul>	6111.04; 6111.07 Part III.2.A. and C and III.11
9710-09-4042	10/4/97	White foamy substance discharging from outfall 005; substance and reason for discharge are unknown.	Unknown amount <ul style="list-style-type: none"> <li>• to outfall 005</li> <li>• to Dicks Creek</li> </ul>	OAC 3745-1-04(B) Part III.2.B
9711-09-4463	11/11/97	Valve was opened in cooling tower basement allowing oil to spill into Dicks Creek.	Approximately 50 gallons <ul style="list-style-type: none"> <li>• to outfall 015</li> <li>• to outfall 003</li> <li>• to Dicks Creek</li> </ul>	OAC 3745-1-04(B) Part III.2.B. and III.11
9711-09-4552	11/19/97	Tank was overfilled allowing zinc sulfate (10% solution) to spill.	Approximately 50 gallons <ul style="list-style-type: none"> <li>• to outfall 004</li> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.11
	1/5/98	Discharge of foam	Significant amount witnessed by OEPA personnel/004	Part III.2B OAC 3745-1-04(B)
9801-09-0170	1/13/98	A cracked pipe at flange outside of electrogalvanizing line resulted in the bypassing/spill (on 1/12/98) of untreated acid and caustic rinse water/wastewater.	Approximately 200 gallons <ul style="list-style-type: none"> <li>• to storm sewer</li> <li>• to outfall 004</li> <li>• to Dicks Creek</li> </ul>	NPDES Permit Part III.11; ORC 6111.07
9802-09-0551	2/14/98	Oil leak from outside storage	40 gallons <ul style="list-style-type: none"> <li>• to outfall 015</li> <li>• to Dicks Creek</li> </ul>	OAC 3745-1-04(B) Part III.2.B. and III.11
	3/16/98	Unknown discharge caused fish kill downstream of outfall. Fish above outfall were not affected.	Unknown amount <ul style="list-style-type: none"> <li>• to outfall 015</li> <li>• to Dicks Creek</li> <li>• 351 fish killed</li> </ul>	OAC 3745-1-04(D) Part III.2.D.
9903-09-1092	3/29/99	Sulfuric Acid leak from above ground & overhead Q-piping because a valve was left open on coke plant.	Unknown amount <ul style="list-style-type: none"> <li>• to Dicks Creek</li> </ul>	ORC 6111.04; ORC 6111.07 Part III.2.D. and III.11

**OTHER STATE CLAIMS**

OCCURRENCE	DATE	PROVISIONS
PCB seeps	1997, 1998	611104; 611107; OAC 3745-1-04
Outfall 009 -- landfill discharge	1987-1997	611104; 611107



ATTACHMENT B  
CLEAN AIR ACT

I. CLAIMS

- A. Claims under 40 C.F.R., Part 61, Subpart L, National Emission Standard for Hazardous Air Pollutants for Benzene Emissions from Coke By-Product Recovery Plants associated with lead detection and repair requirements.
- B. Claims under Ohio Administrative Code (OAC) 3745-17-11 for emitting particulate matter in excess of the limit from the Sinter Plant. Stack tests were conducted on September 29, 1995, February 16, 1996, and April 24, 1996.
- C. Nuisance claim under OAC 3745-15-07 associated with kish emissions that have occurred on numerous occasions from 1992 through the present at the blast furnace and the basic oxygen furnace shop.
- D. Claims under OAC 3745-17-07 for exceeding the 20 percent opacity limit for visible emissions at the blast furnace cast house.
- E. Claims under the New Source Review ("NSR") and Prevention of Significant Deterioration ("PSD") provisions, as set forth in a U.S. EPA notice of violation ("NOV"). The NOV also alleges that AK Steel failed to obtain permits required by the Ohio SIP ("Minor Source Permits") for these modifications.

II. PENALTIES

Based on application of Clean Air Act Civil Penalty Policy, a total penalty of in excess of \$17,000,000 has been calculated. The most substantial portion of this amount is attributable to the economic benefit realized by AK Steel by not having installed the appropriate control equipment. An offer to settle all penalties for air violations in the amount of \$5,500,000 was extended to AK Steel during 1999. It has not been accepted.

III. MITIGATION

- A. Benzene Claims - None
- B. Sinter Plant Claims - None
- C. NSR/PSD Claims - an active control system (baghouse) meeting PSD/NSR standards.
- D. Nuisance Claims - 1) AK Steel shall submit a schedule for the installation of

control measures for the fugitive emissions from the blast furnace and the basic oxygen furnace shop; 2) AK Steel shall install and properly operate such control measures; and 3) AK Steel shall maintain compliance with the approved control measures thereafter.

ATTACHMENT C  
RESOURCE CONSERVATION AND  
RECOVERY ACT ("RCRA")

I. CLAIMS

- A. **RCRA Section 7003:** The past handling of solid wastes at AK is currently causing or may be presenting an imminent and substantial endangerment to human health and the environment from releases of PCBs from past solid waste disposal practices into the Unnamed Tributary/Monroe Ditch to Dick's Creek, and Dick's Creek.
- B. **RCRA Section 3008(h):** U.S. EPA has determined that there is or has been a release of hazardous waste into the environment from the AK facility, and as such, the facility is subject to corrective action or such other response measure as deemed necessary to protect human health and the environment.
- C. **State hazardous waste claims,** as set forth in attached table.

II. PENALTY

\$153,600

III. MITIGATION REQUIRED

A. IMMEDIATE ACTIONS

AK Steel must remove any remaining sources of PCBs which may contribute to the groundwater and/or leachate migration to the landfill tributary (Monroe Ditch) or Dick's Creek, curtail any actions which are either causing or contributing to such PCB migration, and remove the PCBs discharged to either Monroe Ditch or Dick's Creek.

Immediate actions which must be taken by AK:

- 1. Conduct an investigation of biological and water quality conditions in Dick's Creek, including, but not limited to, the presence of PCB's in sediments and surface waters of Dick's Creek and contamination in the area of Monroe Ditch and the AK Steel landfill. Collect sampling information related to outfalls 002 and 003 and other upstream locations which are possible past or current sources of PCBs.

2. Remove and properly dispose of remnant sources of PCBs in soil from various locations at AK Steel, based on the results of the investigation conducted for AK by Arcadis Geraghty and Miller (e.g. soil in vicinity of SS-01, BH-15b, BH-07, BH-08, etc.), and any subsequent further characterization. Unless AK removes these sources of PCBs, precipitation and ground water may continue to transport them towards Monroe Ditch and Dick's Creek, where they will pose an imminent threat.
3. Remove and properly dispose of PCBs from Monroe Ditch and Dick's Creek sediments at known locations, based on historical results and the investigation outlined above. Relief should seek to remove the buildup of finer grained sediments as PCBs are known to adhere to finer grained particles.
4. Inspect, at a minimum, the creek banks along Monroe Ditch and the area of Dick's Creek adjacent to the closed landfills, at least weekly, for evidence of seepage, or impacts from seepage, to surface waters (i.e., Dicks Creek and the landfill tributary/Monroe Ditch), and continue to inspect until the source of PCBs/waste material seepage is eliminated or remediated. If evidence of additional waste material seepage is noted, AK must conduct sampling to determine the effects of the seepage on surface waters. AK should record these inspections in a log and if any seepage is detected, immediately inform OEPA SWDO staff.
5. Investigate alternatives to further control the influence of the kish pot operation on ground water flow. These operations could include relocation of the kish pot operation managed by Olympic (formerly IMS) to another location on the facility, and further curtailment of water usage or other control of the operation. A pump in use in the area, which requires a constant flow to be primed, should be replaced immediately with a self-priming pump to decrease water use, and a permanent water recycle system should be installed to prevent the migration of the water used for air pollution control purposes into the ground water.
6. Continue to eliminate seepage of ground water contaminated with PCBs and/or other waste material to surface waters of the state in the area presently known (i.e. operate and maintain a system continuously to prevent seepage, and monitor the effectiveness of the installed trenching and interim treatment system, including filter condition and treated effluent water)
7. Prevent any treated water from entering surface water unless permitted.

8. Eliminate seepage to waters of the State in areas where it may occur in the future.
9. Fund a study of possible upstream sources of PCB, to the extent AK Steel denies that the PCB sediments are associated with its operations. AK personnel should sample all active outfalls at least 5 times and visually inspect the entire creek bank to ascertain and sample any other sources of discharge, including any newly identified seeps.
10. Monitor water quality, at least quarterly, for possible impacts from seepage.

## B. LONG TERM ACTIONS

In addition, other long term relief is needed, as outlined below, to completely alleviate the long term potential for human health impacts and environmental harm from PCBs at AK Steel.

### 1. Site-Wide Corrective Action Under RCRA 3008(h)

There is a clear need for a site-wide evaluation of groundwater and other media to determine the full rate, nature and extent of contamination at the site. Site-wide corrective action must be conducted in accordance with U.S. EPA guidance (OSWER Directive 9902.3-2A RCRA Corrective Action Plan, May 1994) or the State of Ohio Corrective Action Plan.

### 2. Trench System

AK must evaluate the current trench and treatment system to ensure that the design is adequate to ensure permanent interception, and determine if additional measures are necessary. In the interim, AK Steel must continuously operate and maintain the system within the Landfill area to prevent waste material seepage to the surface waters. Control of the seepage may include an enhanced trench operation, the circumstances may require much more.

### 3. Ground Water

While investigation of the landfill area surrounding the Monroe Ditch is ongoing, additional work is necessary. AK should characterize ground water flows and their impact on PCB contamination. This characterization must identify seeps and potential paths for leachate. AK should prepare a work plan for additional work, submitting the plan to OEPA and U.S. EPA for review and approval. In particular, the plan should require AK to evaluate a northern flow path towards

Dick's Creek to determine if PCB contamination in the slag processing area has caused the PCB contamination in Dick's Creek upstream of the confluence with the landfill tributary.

AK Steel must also investigate the western bank of the Monroe Ditch to determine if additional seeps are present or possible and what contribution the closed landfill cells may make to PCBs problems in the sediments.

#### 4. Sediment Sampling

Subsequent to the initial removal action, AK Steel must conduct a comprehensive sediment sampling program to confirm the elimination of PCBs from the sediments of Monroe Ditch and Dick's Creek to acceptable levels. AK should also sample areas considered free of PCBs to identify the nature and extent of sediment contamination in the surficial and deep sediments of the surrounding area - including upstream of the Facility in Dick's Creek, and upstream and downstream of the confluence with Dick's Creek in the Great Miami River. AK should conduct the sediment sampling according to U.S. EPA and OEPA approved quality assurance/quality control practices. AK must collect and analyze core samples at the discrete intervals of 0-6 inches, 6-12 inches, and 12-18 inches in depth. Depending on the results, additional depths may be necessary as well. Depending on the removal action implemented, AK may need to conduct sampling at additional sites.

AK Steel must submit for review and approval by U.S. EPA and OEPA a sediment sampling plan describing the proposed sampling locations, the sampling and analytical methods, the constituents subject to sampling and analysis, a schedule for implementation, and a QA/QC plan. Within 90 days after work is completed, AK must prepare and submit for review and approval a final report on the sediments. Any consent decree should include a provision for additional removal activities if later sampling results show PCBs are still present in certain areas.

#### 5. Fish Tissue Sampling

AK Steel must sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dicks Creek and tributaries through an Ohio EPA approved sampling and analysis plan (Fish Tissue SAP)--by July 30, 2001 and annually thereafter through the year 2011 for the presence of and any impacts from waste materials, e.g., PCBs, PAHs/BNAs, and heavy metals. AK must submit reports to OEPA of their of annual evaluations, within 90 days of completion of its work. This report and plan will be subject to modification, amendment, and or revision based on changed conditions or new information.

6. Effluent reuse

AK must rectify the high pH (pH of 12) in groundwater in the slag processing area. At least a portion of this flow currently emerges at the PCB treatment system, which does not stabilize the pH of the ground water. There is a strong possibility that this highly basic water, even if not contaminated with PCBs could affect the surface water near the site. AK Steel must assess whether the practice of reuse of the effluent from the slag processing operations (e.g. dust control, etc.) results in (a) concentration of PCBs or other waste materials in soil or other media at the site, or (b) poses a risk of runoff to any surface waters. AK must prevent this effluent from entering any waters of the State, unless permitted in accordance with State or Federal laws.

7. Surface Water

AK Steel must conduct instream biological monitoring of the Great Miami River (appropriate to AK's outfalls), Dicks Creek and tributaries, through an Ohio EPA approved sampling and analysis plan (Aquatic Life SAP)--by July 30, 2001 and annually thereafter through the year 2011. These activities must include:

- i. evaluation of the attainment status of aquatic life uses and health of aquatic environment based on biological criteria provided by Ohio Adm. Code 3745-1-07, table 7-14--Index of Biotic Integrity (IBI) (based on fish communities), the Modified Index of Well-Being (MIWB) (based on fish community health characteristics), Invertebrate Community Index (ICI) (based on macro invertebrate communities), and
- ii. evaluation, simultaneously with each annual aquatic life attainment status evaluation, the aquatic habitat of Dicks Creek in accordance with the Qualitative Habitat Evaluation Index (QHEI). Reports of annual evaluations must be submitted to U.S. EPA and Ohio EPA.

8. Spills, Bypasses and Other Unauthorized Discharges

AK Steel must permanently prevent spills, bypasses and other unauthorized discharges from reaching waters of the State. AK must report each spill, bypass and unauthorized discharge in accordance with Ohio laws. Each spill or unauthorized discharge event to waters of the State would be subject to stipulated penalties, where payment of such penalties would not release AK from any other obligations related to the event or limit the State's authority to seek additional relief or civil penalties for the event.

AK Steel must re-evaluate and include within the best management practices (BMP) plan(s) for the site the identification, mapping and assessment of the adequacy of: subsurface drains, sewers, sumps, and piping; raw materials, intermediate materials; product and waste storage and disposal areas; storm water drainage pathways; likely spill migration pathways; tank dikes, storage and material handling practices; and the potential for spills in loading docks and rail siding areas. AK Steel must submit the revised BMP plan to Ohio EPA (where submission of the revised plan would not release AK from its obligation to eliminate unauthorized discharges or prevent spills to waters of the State) and implement the revised BMP.

AK Steel must conduct annual personnel training and refresher courses on spill and unauthorized discharge prevention, such that personnel are able to effectively prevent and respond to spills or other unauthorized discharge events to waters of the State. Such training would be to familiarize site personnel with emergency procedures, equipment and systems, including: procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment; key parameters for automatic product or waste feed cut-off systems; communications or alarm systems; response to ground water contamination incidents; and shutdown of operations. AK must maintain records of personnel training conducted until the cessation of operations at the site.

#### IV. TERMS AND CONDITIONS

In addition to the above, AK Steel would be required to enter into a consent decree containing standard clauses, stipulated penalties for future violations and for failure to meet the requirements of the consent decree. AK Steel will also be required to pay Ohio EPA its response costs to date.



TABLE OF STATE HAZARDOUS WASTE CLAIMS

Claim	Rule	Dates	Approx. No. Days	Amount of Penalty
Illegal coking tar storage pile	R.C. 3734.02	11/21/89 - 5/6/91 (closure plan submitted)	539	\$20,000
Failure to maintain and operate facility to prevent SPL releases	3745-65-31	2/1/89, 5/25/91, 10/10/91, 2/16/93, 8/4/93, 1/12/94, 1/11/96, 8/10/96, 10/18/96, 4/22/97	10	\$50,000
Failure to inspect turn flux skimming waste storage areas	3745-65-74	3 weeks in July and August, 1989	3	\$ 3,000
Failure to have written closure plan	3745-66-11	11/21/89 - 5/6/91	610	\$ 5,000
Failure to have detailed closure cost estimate for coking tar sludge pile	3745-66-42 3745-66-94 3745-55-94	11/21/89 - 10/15/93	1424	\$ 5,000
Failure to have secondary containment for 10,600 gallon SPL tank system	3745-66-93	11/21/89 - 3/8/91	479	\$23,950
Failure to prevent release from 75,000 gallon SPL tank system	3745-66-93	11/2/90	1	\$8,000
Failure to have secondary containment free to gaps and cracks for the "Ashland tank"	3745-66-93	2/15/94 - 3/27/95	405	\$20,250
Failure to inspect SPL tank systems daily	3745-66-95	1/4/92; 2/6, 22, 29/92; 3/9, 12-14, 18-19, 21, 26/92; 4/6-8, 16-17/92	17	\$3,400
Failure to prevent runoff from coking tar sludge pile	3745-67-53(A)(3)	11/18/91 - 12/3/91	15	\$15,000
TOTAL			3503	\$153,600.00





**Mark Moloney**

02/08/00 12:14 PM

To: Michael Mikulka/R5/USEPA/US@EPA

cc:

Subject: AK Steel Process Writeup

Mike:

Attached is the write-up for the process section of the AK Steel MM inspection report. I don't have an electronic version of the two figures contained in the document so I'll fax these to you.

Mark



9707ak.p

**AK5 0005413**



**PROCESS DESCRIPTION/WASTE GENERATION**  
**MULTI-MEDIA COMPLIANCE INVESTIGATION**

**AK STEEL**  
**MIDDLETOWN, OHIO**

**AK5 0005414**

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AK5 0005415

## PROCESS DESCRIPTION/WASTE GENERATION

### GENERAL

This report provides a brief summary of AK Steel process operations. It also includes a description of the waste streams generated in each area of the mill.

The AK Steel Middletown Works produces flat rolled steel products and intermediate products of pig iron and coke byproducts. Production and support operations at the plant include:

- Wilputte Coke Battery
- Sinter Plant
- Blast Furnace
- Basic Oxygen Furnace (BOF) Shop
- Controlled Argon Stirring-Oxygen Blowing Facility
- Vacuum Degasser
- Continuous Caster
- Hot Strip Mill
- Nos 4 and 5 HCl Pickling Lines
- Cold Strip Mills
- Batch Annealing Furnaces
- Three Temper Mills
- Continuous Annealing Hot Dipped Galvanizing Line (Zinc Grip Line)
- Continuous Annealing Hot Dipped Aluminized Line
- Electrogalvanized Line
- Terne Coating Line
- No. 2 Boiler House
- Water Treatment Plant - Lime Softening

The plant is located on a 2791-acre site located in Butler County Ohio, near the City of Middletown. Figure 1-1 is a site map of the facility.

Steel making at AK Steel begins with the production of coke from coal in a coke oven battery. Coke, iron ore and limestone are converted into molten iron in the blast furnace. The

AK5 0005416

molten iron and scrap are further refined into steel in the basic oxygen furnaces (BOF). After further refining in vacuum degasser or the controlled argon stirring oxygen blowing facility the molten steel from the BOFs is cast into slabs at the continuous caster. The slabs are then rolled into thin sheet steel at the hot strip mill. Depending on customer requirements the steel can then be sent through various finishing operations for further processing. The finishing operations at the Middletown Works include: hydrochloric acid pickling, cold rolling, batch annealing, temper rolling, continuous annealing/hot dip galvanizing, continuous annealing hot dip aluminizing, electrogalvanizing and terne coating. Figure 1-2 contains a process flow diagram for AK Steel. Production levels for the various operations at the plant are contained in table 1-1.

<b>TABLE 1-1</b> <b>AK STEEL - MIDDLETOWN WORKS</b> <b>PRODUCTION LEVELS</b>	
<b>Process Operation (plant area)</b>	<b>Maximum Production* (tons/day)</b>
Wilputte Coke Battery	1470
No. 3 Blast Furnace	5691
Basic Oxygen Furnace Shop	9395
Continuous Caster	6680
Vacuum Degasser	3589
Hot Strip Mill	10140
No. 3 Cold Mill	6147
No. 5 Temper Mill	2880
No. 6 Temper Mill	4157
No. 7 Temper Mill	769
No. 4 HCl Pickling Line	3810
No. 5 HCl Pickling Line	4491
No. 3 Zinc Grip Line	1688
No. 4 Aluminize Line	1054
No.2 Electrogalvanizing Line	4133
No. 2 Terne Coat Line	478

\* Production data taken from 1991 NPDES permit application

Numerous solid wastes, air emissions and wastewater streams are generated during steel making at AK Steel. The major waste streams for each of the process operations are identified in table 1-2. These waste streams are discussed in the following process descriptions and in the various media specific technical reports which are attached.

AK5 0005417



**FIGURE 1-1**  
**FIGURE 1-2**

**AK5 0005418**

## PROCESS DESCRIPTION

### Coke Plant

The production of metallurgical coke is an essential part of the steel industry since it provides one of the basic raw materials necessary for the operation of the ironmaking blast furnaces. Coke, which is carbon rich, is used as a carbon source and as fuel to heat and melt iron ore in ironmaking. The by-product recovery process is the standard method of producing coke in the United States. The by-product recovery process, as its name implies, not only produces high quality coke for use as a blast furnace fuel but also provides a means of recovering the valuable byproducts of distillation.

Cokemaking begins with bituminous pulverized coal being charged into a coke oven through ports in the top of the oven. After charging the oven ports are sealed and the coal is heated at high temperatures (1600E - 2300E F) in the absence of oxygen. Coke manufacturing is performed in a batch mode where each cycle lasts 14-to 36 hours. A coke oven battery comprises a series of 10 - 100 ovens located side by side with a heating flue between each oven pair. Volatile compounds are driven from the coal, collected from each oven and processed for the recovery of combustible gases and other coal byproducts. The solid carbon remaining in the oven is the coke. The necessary heat for distillation is supplied by external combustion of fuels (recovered coke oven gas, blast furnace gas) through flues located between ovens. At the end of the heating cycle the coke is pushed from the oven into a rail quench car. The quench car takes the coke to the quench tower where it is cooled with a water spray. The coke is then screened and transported to the blast furnace or to storage.

In the by-products recovery process, volatile components of the coke oven gas stream are recovered including the coke oven gas, naphthalene, ammonium compounds, crude light oils, sulfur compounds, and coke breeze (fines).

AK Steel has one operational coke battery known as the Wilputte Battery which contains 76 ovens. A second battery at the plant was permanently shut down in December 1995. The byproducts area at AK produces coke oven gas, tar, anhydrous ammonia and sulfuric acid from the gas streams generated by the battery.

Air emissions from the coke making operations at AK include: particulates from the coal handling operations; particulates and gaseous emissions from the coke ovens; particulates from the coke handling and coke quenching operations; gaseous emissions from the battery exhausters and vessels in the byproducts area including tar and flushing liquor vessels, final cooler, wash oil tank, wash oil decanter and the tar tank. Two filter baghouses are used to control particulate emissions from coal handling operations. A filter baghouse is used to control particulates during battery pushing operations.

Wastewater streams generated during coke making include: excess ammonia liquor, final cooler wastewater, gas condensate and noncontact cooling water system blowdown. These

AK5 0005419

wastewater streams are discharged to the City of Middletown sewer system and are regulated by a pretreatment permit issued by the city.

The main solid waste generated at the coke plant are tar decanter sludge and tar collection tank sludge. These waste streams are a listed hazardous waste(K087). At AK Steel this waste is recycled by mixing the sludge with the coal prior to it being charged into the coke battery.

### **Blast Furnace**

A Blast furnace is a large cylindrical structure in which molten iron is produced by the reduction of iron bearing ores with coke and limestone. Reduction is prompted by blowing heated air into the lower part of the furnace. As the raw materials melt and decrease in volume, the entire mass of the furnace charge descends. Additional raw materials are charged at the top of the furnace to keep the raw materials within the furnace at a constant level. The furnace is occasionally tapped and the molten iron is removed through a set of runners into a refractory lined railroad car for transport to the steelmaking furnaces. Slag, a waste byproduct generated in the furnace, is removed during tapping to a pit adjacent to the furnace and allowed to cool prior to removal.

Gases produced as a result of combustion in the blast furnace(BF) are a valuable heat source but require cleaning before reuse. The gases are exhausted through the top of the furnace. The BF gas is cleaned and cooled using water in gas coolers and a gas scrubber. After being cleaned and cooled the gas is used to preheat the incoming air to the blast furnace. The blast furnace gas is also used as fuel for plant boilers.

The AK Steel Middletown Plant has one blast furnace. This is the No. 3 furnace which is a two tap hole/two cast house furnace. The raw materials used at the AK furnace include: iron ore, limestone, coke, sinter and hot briquetted iron (HBI).

Emissions from the blast furnace are released to the air, water and the land. Air emissions include those generated during materials handling, iron tapping, slag cooling and from leakage or bleeding of blast furnace gas. Process wastewater is generated at the blast furnaces by the gas cooling, gas cleaning and slag pit cooling operations. The solid wastes generated by blast furnace operations include slag and the dust and sludges produced in gas cleaning and water cleaning operations.

The air emissions generated during iron ore unloading, iron tapping and ore screening and handling are uncontrolled. The gas produced during the conversion of raw materials to molten iron is cleaned using cyclones/multiclones and a wet scrubber prior to being used as a fuel source.

Wastewater generated by gas cooling and scrubbing operations, from seals and drip legs and slag pit cooling passes through a thickener and is then recycled back to the furnace for reuse. The blowdown from this recycle system combines with the noncontact blast furnace shell cooling water and process wastewater from the sinter plant prior to being treated in the blast

furnace/sinter plant wastewater treatment system. The discharge from this treatment plant (outfall 613) combines with other AK Steel wastewaters and is discharged through outfall 011 to the Miami River.

The slag produced by the AK blast furnace is processed by IMS a contractor, processed and reused as aggregate. The sludges generated by the air and water pollution control systems are disposed of at the company's on-site landfill.

### **Sinter Plant**

Sintering is the process that agglomerates fines (including iron ore fines, pollution control dusts, coke breeze, water treatment plant sludge, coke breeze and flux) into a porous mass for charging into the blast furnace. Through sintering operations the mill can recycle iron-rich material such as mill scale and slag back to the blast furnace.

At the sinter plant the input materials are mixed together, placed on a slow moving grate and ignited. A windbox under the grate draws air through the materials to deepen the combustion throughout the traveling length of the grate. The coke breeze provides the carbon source for sustaining controlled combustion. During this process the materials are fused together into sinter agglomerates which can be used as a raw material at the blast furnace. The AK Steel sinter plant uses coke breeze, sinter ore, mill scale, taconite pellet fines and sinter fines as input materials.

Air emission sources at the sinter plant include raw material preparation operations, the windbox, the sinter breaker and sinter screening. The sinter windbox emissions are controlled using cyclones, multiclones and a wet scrubber. A baghouse is used to control particulate emissions from the sinter breaker. Emissions from the raw materials preparation and the sinter screening areas are uncontrolled.

The sinter windbox scrubber wastewater is routed to the blast furnace/sinter plant wastewater treatment plant (WWTP) prior to being discharged through outfall 613. Stormwater from the sinter plant are is discharged through outfall 003 to the Dicks Creek.

Several solid wastes are produced as a result of sinter plant operations. These include dusts from the sinter breaker baghouse and the windbox cyclones/multiclones, and sludges generated at the blast furnace/sinter plant WWTP. The dusts generated by air pollution control equipment at the sinter plant is generally recycled back to the sinter plant for use as a raw material. If these dusts need to be disposed they are landfilled on-site. The sludges produced during wastewater treatment are landfilled on-site.

### **Basic Oxygen Furnaces (BOF)**

Basic oxygen furnace steel making involves the production of steel in pear-shaped, refractory lined, open-mouth furnaces using a mixture of molten iron from the blast furnaces, cold steel scrap, alloy materials and fluxes. Oxygen is injected (blown) into the furnace at

supersonic velocities through a water cooled copper tipped steel lance in order to melt and refine the mixture. The oxygen reacts with the carbon and silicon generating the heat necessary to melt the scrap and oxidize the impurities. This is a batch process with a 45 minute cycle time. Various alloys are added in order to produce different grades of steel. The hot steel produced is transferred to a continuous caster for direct conversion into steel slabs. Slag is also produced during this process from the impurities removed by the combination of the fluxes with injected oxygen.

Other operations associated with the BOF process include hot metal transfer and desulfurization. The hot metal transfer station is where molten iron is poured into a transfer ladle for charging into the BOF. Sulfur is removed from the hot metal during the desulfurization process. Lime and manganese are blown into the hot metal using a lance in order to react with the sulfur in the metal. This reaction produces magnesium sulfide which floats to the top of the ladle as slag. The slag is then skimmed off thus reducing the sulfur content of the iron prior to it being used as a raw material in the basic oxygen process.

AK Steel has two 225 ton capacity basic oxygen furnaces in its BOF Shop. These furnaces are numbered #15 and #16. The plant has two desulfurization stations. One station is located outside the BOF shop building and is used only occasionally.

Air emissions are produced at the BOF shop during the oxygen blow, hot metal and scrap charging, tapping, hot metal transfer, desulfurization, skimming and flux handling. The BOF shop uses a control system consisting of a gas quencher, wet scrubber and a flare in order to control emissions generated by the operations of each BOF vessel. Emissions generated during hot metal transfer and desulfurization operations are controlled using a baghouse. The BOF deslagger, the flux handling equipment and the outside desulfurization system are each controlled using their own baghouse system.

Furnace gas cooling and cleaning operations and noncontact cooling water are the major sources of wastewater generated at the BOF shop. The wastewater generated at the BOF shop is treated at the BOF wastewater treatment facility. This system is designed to treat and recycle much of the contact and noncontact wastewater back to the BOF for reuse. Blowdown from this treatment system is discharged from outfall 631. This wastewater stream combines with the stormwater from the sinter plant and is discharged through outfall 003 to Dicks Creek.

Major solid waste streams generated at the BOF shops include: slag, and the sludges and dusts produced by water and air pollution control equipment. The wastewater treatment sludges generated at the BOF are landfilled on-site. The dusts produced in the desulfurization and deslagger baghouses are shipped off-site for disposal in a landfill as a non hazardous waste. The slag generated at the BOF shop is processed by IMS, a contractor, in order to reclaim metallic material for reuse.

#### **Controlled Argon Stirring - Oxygen Blowing (CAS-OB) and Vacuum Degassing**

The steel produced in the BOF can be further refined in the controlled argon

stirring-oxygen blowing facility. The CAS-OB operation allows the adjustment of the molten steel chemistry and the temperature in order to meet desired steel specifications.

Vacuum Degassing is the process where molten steel is subjected to a vacuum in order to remove impurities and produce steels of high metallurgical standards. Hydrogen, oxygen and nitrogen are removed because these gases impart undesirable qualities to the steel. The steam from the ejectors used to produce a vacuum is condensed producing a wastewater stream from this process. AK Steel uses the Rheinstahl Huttenwerke(R-H) argon degassing method where the equipment consists of a vacuum chamber with two snorkel tubes which are immersed in the molten steel. When the tubes are immersed argon gas is introduced in one snorkel tube forcing the molten steel to rise in the other tube because of the pressure differential. The molten steel rises up one tube into the vacuum chamber and flows down the other tube back to the ladle. The molten steel is recirculated until the desired level of gas removal is achieved.

Both the CAS-OB unit and the vacuum degasser generate air emissions which are controlled using a baghouse. The wastewater generated by the vacuum degasser is treated at the Hot Strip Mill (HSM) Wastewater Treatment Plant prior to being discharged through internal outfall 005 which flows to outfall 015 discharging to Dicks Creek. The sludges generated at the HSM wastewater treatment plant are disposed at the AK Steel on-site landfill. Baghouse dusts are classified as non hazardous and are shipped off-site to a sanitary landfill for disposal.

### **Continuous Caster**

Continuous casting is the process by which molten steel is poured from a ladle into a refractory lined tundish that maintains a constant head of molten to produce a steel slab. The metal is poured into oscillating water cooled copper molds where partial solidification occurs. The molds oscillate to prevent the steel from sticking to them. As the metal solidifies, the product is removed continuously to a series of cooling zones. After the center of the slab has solidified, it is cut into lengths using an automated torch cutting system. AK Steel has single twin slab caster.

Water is used in the caster for both contact and non-contact cooling and for air pollution control at the caster. Wastewater generated at the caster is treated in the Hot Strip Mill Wastewater Treatment Facility prior to being discharged through outfall 015 to Dicks Creek. Air emissions are generated from the water spray exhausts. Solid wastes generated during casting operations include wastewater sludges. These wastes are landfilled on-site.

### **Hot Strip Mill**

A hot strip mill (HSM) reduces the slabs produced at the continuous caster into flat strip steel with a thickness of less than 0.5 inches. The slabs are reheated to a rolling temperature (2000 -2400 F) in reheat furnaces or delivered hot from the continuous caster to the HSM. The heated steel is passed between two rolls revolving in opposite directions, called a stand. The HSM consists of a series of these rolling stands each designed to produce an incremental reduction in the thickness of the steel.

AK Steel has an 86-inch hot strip mill. Wastewater generated at the hot strip mills includes scale removal water and contact cooling water. Air emissions are generated by the operation of the gas fired reheat furnaces, the rolling mill line and the slab scarfing/slitting operations. Solid wastes include wastewater sludges generated in scale pits and wastewater treatment units and roll grindings from a roll grinding operation at the HMS.

Process wastewater generated at the 86-inch HSM are treated at the Hot Strip Mill Wastewater Treatment Facility. Here the wastewater from the HMS, continuous caster and the vacuum degasser is treated and recycled back to these production operations for reuse. Blowdown from the this treatment system is discharged through internal outfall 005 to outfall 015 which discharges to Dicks Creek. The gas fired reheat furnaces, slab scarfing/slitting operations and the HSM line have no air pollution control equipment. The wastewater treatment sludges and roll grindings are disposed at the on-site AK Steel. Scale is sent to the sinter plant for recycle.

### **Pickling Lines**

Acid pickling is the process of chemically removing oxides and scale from the surface of the steel by the action of water solutions of inorganic acids. AK Steel has two hydrochloric acid pickle lines. They include the No.4 and No.5 Pickle Lines. Pickling is conducted in horizontal pickling tanks. The strip is drawn through the acid bath and is rinsed with water in a series of tanks. Each of these two pickling lines have two scrubbers for the control of acid fumes from the acid tanks and the rinse tanks.

Wastewater and spent pickle liquor (hazardous waste K062) are generated at the pickling operation. The wastewater generated at these pickling operations is treated at the South Terminal Treatment plant along with wastewaters from the Cold Mill. The treated wastewater streams are discharged through outfall 641 and combine with wastewaters from outfall 642 and together are discharged through outfall 004 to the North Branch of Dicks Creek. The spent pickle liquor from these pickle lines is disposed in the deep wells operated by AK Steel.

### **Cold Rolling Mill**

Cold Rolling is that operation where unheated metal is passed through a pair of rolls to reduce its thickness, to produce a smooth dense surface, and to develop controlled mechanical properties of the metal. Cold reduction is performed in a tandem mill where the thickness of the product is reduced by relatively large amounts with each pass through the rolls. The No. 3 cold mill at AK Steel is a five stand rolling mill.

Wastewater discharges are a result of water used during cold rolling to cool the rolls and the material being rolled. Solid wastes generated during cold rolling operations include waste oils used for lubrication, scale and sludge generated by wastewater treatment, and roll grindings. Baghouses are used to control air emissions from roll shot blasting and grinding operations in these mills.

### **Batch Annealing**

During cold rolling the steel can become hard and brittle. In order to make the steel more ductile it is heated in an annealing furnace. AK Steel has batch type annealing operations. The coils of strip steel can be stacked in a batch furnace and heated for 25 to 45 hours at 1300 F. This operation generates air emissions.

AK has four anneal operations. These include: the No. 84 anneal with 75 anneal stands, the No. 64 anneal with 123 anneal stands, the No. 94 anneal with 124 anneal stands and the open coil anneal with 39 anneal stands. The air emissions from these operations are all uncontrolled.

### **Temper Mills**

Temper mills are single stand rolls used to reduce the thickness of the steel a few percent in order to impart desired mechanical properties and surface characteristics. AK Steel has three temper mills numbered 5, 6 and 7.

Waste streams generated at these mills are similar to those at the NO. 3 Cold Mill. Wastewater discharges are a result of water used during tempering to cool the rolls and the material being rolled. Solid wastes generated during temper mill operations include waste oils used for lubrication, scale and sludge generated by wastewater treatment, and roll grindings.

### **Coating Lines**

The Middletown Works includes four coating lines designed to apply a coating to the steel strip produced at the mill. These lines include a continuous annealing/hot dip galvanizing line, continuous annealing hot dipped aluminized line, electrogalvanized line and a terne coat line. Three lines are hot coating processes involving the immersion of clean steel in baths of molten metal for the purpose of depositing a thin layer of metal on the surface of the steel. The electrogalvanizing line involves the electrolytic deposit of metal on the surface of the steel strip. The coatings include zinc on the hot dip galvanizing line, aluminum on the hot dip aluminized line, lead and tin on the terne line and zinc or zinc nickel alloy on the electrogalvanizing line. Each of the coating lines include cleaning operations such as alkaline cleaning and acid pickling prior to metal coating. Two of the lines also include a continuous annealing operation prior to coating.

A brief discussion of the waste streams generated at each line is included below:

#### **Electrogalvanizing Line**

The major waste streams generated at the No. 2 electrogalvanizing line (EGL) include: cleaning and pickling rinsewaters, plating rinsewaters, scrubber wastewaters, fumes from the various tanks, waste pickle liquor and sludge from the wastewater treatment facility. The plating wastewaters generated at this process are treated at the EGL wastewater treatment system and discharged through outfall 642. The other wastewaters generated at the EGL are treated at the south terminal treatment plant and discharged through outfall 641. The effluent from outfalls 641 and 642 combine and are discharged through outfall 004 to the North Branch of Dicks Creek. Two scrubbers are used to control the fumes generated from the electrogalvanizing line.



The waste pickle liquor produced on this coating line is used at the South Terminal Treatment facility for pH adjustment. The sludge generated at the EGL wastewater treatment plant can be nonhazardous or hazardous depending on the coating applied. When zinc only is used the sludge is nonhazardous and is sold for zinc reclamation. If a nickel-zinc coating is produced the sludge generated is hazardous (F006) and is shipped off-site for disposal.

#### Aluminum Coating Line

The major waste streams generated at the aluminize line include rinse waters and the fumes from the hot dip pot. Wastewater is treated at the south terminal treatment facility (outfall 641). The air emissions from the line are uncontrolled.

#### Zinc Coating Line

The waste streams from the zinc line include alkaline cleaning wastewaters, quench water, scrubber wastewaters, fumes from the various tanks, and sludge from the wastewater treatment facility. The wastewater generated at the zinc line are treated at the north terminal treatment facility prior to being discharged through outfall 614. The fumes from the various tanks are controlled using a wet scrubber. The sludge generated at the north terminal treatment plant is sent to the company's on-site landfill for disposal.

#### Terne Coat Line

The waste streams from the terne coat line include alkaline rinsewaters, pickling rinsewaters, quench water, fume scrubber wastewaters, fumes from the line, waste pickle liquor, terne flux skimmings, and wastewater treatment plant sludge. The wastewaters generated at the terne coat line are treated at the north terminal treatment facility prior to being discharged through outfall 614. Waste pickle liquor(HCl) is used for wastewater neutralization. The terne flux skimmings generated at the terne pot are a hazardous waste (D008) and are disposed off-site.

#### Miscellaneous Operations

The Middletown Works contains a number of support operations which have the potential to release pollutants to the environment. These include: boilers used to produce heat and steam for process operations, on-site landfill operations, and deep well injection operations.

The plant has eight boilers. These include four waste heat boilers and four boilers located in the No. 2 boiler house. The waste heat boilers operate using the waste heat generated at the slab reheat furnaces located at the hot strip mill. The four boilers at the No. 2 boiler house use blast furnace gas as their primary fuel source. Natural gas and fuel oil can also be burned in these boilers.

AK Steel conducts active landfiling operations on a 28 acre site located south of Oxford State Road. This landfill has operated since the early 1980s. The landfill is used for the disposal of wastewater treatment plant sludges from several of the wastewater treatment plants operated

at AK. The landfill is operated under Ohio EPA solid waste rules for a residual waste landfill. Railcars transport sludges from the plant to trenches where the sludge is covered with soil daily. AK also has a number of inactive landfill sites located south of Oxford State Road.

AK operates two deep wells for the disposal of waste pickle liquor. These are Class I injection wells. The company began operating the wells in 1969.

AK5 0005427

Table 1-2  
Major Steel Mill Waste Streams  
AK Steel, Middletown, Ohio

Process Areas	Solid Waste (Hazardous Waste No.)	Air Emission Sources (Source No.)	Wastewater Sources (outfall No.)
Coke Plant/Byproducts Area Wilputte Battery (76 ovens)	-Tar decanter sludge (K087) -Tar collection tank sludge (K087)	-Coal Handling (F003) -Wilputte Coke Battery -Wilputte Coke Battery Quench Tower (P043) -Coke Handling (F005) -Coke Oven Gas Exhausters (P068) -Gas Holder Flare (P067) -Wilputte tar and flushing liquor vessels (P075) -Final Cooler, wash oil tank and decanter (P070) -East tar tank (T002)	-Mill water cooling tower blowdown (city) -Final cooler cooling tower blowdown (city) -Ammonia distillation process wastewater (city) -coke oven gas condensate (city) -wash oil decanter wastewater (city)
Blast Furnace	-Blast furnace slag -Blast furnace/sinter plant wastewater treatment plant sludge	-Iron ore unloading (F010) -Ore screening and handling (F008) -Blast furnace raw material handling (F012) -Blast furnace (P925): relief stack, flare stack, stove stacks and cast house	-Gas scrubbing wastewater (613) -Gas cooling wastewater(613) -Seals and drip legs (613) -Slag pit cooling wastewater (613) -Indirect furnace cooling (613)
Sinter Plant	-Sinter breaker baghouse dust -Sinter windbox cyclone dust -Blast Furnace/sinter plant wastewater treatment sludge	-Sinter plant raw materials preparation (F009) -Sinter windbox (P908) -Sinter breaker (P936) -Sinter screening (F007)	-Sinter windbox scrubber wastewater (613) -Stormwater (011)

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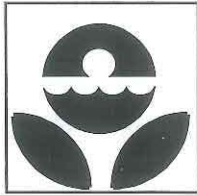
Basic Oxygen Furnace Shop (two 225 ton vessels)	<ul style="list-style-type: none"> <li>-BOF slag</li> <li>-Outside desulfurization baghouse dust</li> <li>-Hot metal transfer/desulfurization baghouse dust</li> <li>-Deslagger baghouse dust</li> <li>-Flux handling baghouse dust</li> <li>-BOF wastewater treatment sludge</li> </ul>	<ul style="list-style-type: none"> <li>-Outside desulfurization station (P956)</li> <li>-Hot metal transfer/desulfurization (P047)</li> <li>-BOF deslagger (F011)</li> <li>-BOF flux handling (P901)</li> <li>-No. 15 BOF vessel (P926)</li> <li>-No. 16 BOF vessel (P927)</li> <li>-Horizontal ladle preheaters (Z001, Z002, Z003)</li> <li>-Vertical ladle dryer preheater (Z004)</li> </ul>	<ul style="list-style-type: none"> <li>-BOF vessel 15 quencher and scrubber wastewater (631)</li> <li>-BOF vessel 16 quencher and scrubber wastewater (631)</li> <li>-BOF noncontact cooling wastewater (631)</li> <li>-BOF area stormwater (003)</li> </ul>
Controlled Argon Stirring - Oxygen Blowing	-CAS/OB-Vacuum Degas baghouse dust	-CAS/OB vessel (P934)	
Vacuum Degasser	-CAS/OB-Vacuum Degas baghouse dust	-Vacuum degas vessel (P935)	-Condenser wastewater (005)
Continuous Caster	<ul style="list-style-type: none"> <li>-Scale from scale pit</li> <li>-Hot Strip Mill Wastewater treatment plant sludge</li> </ul>	<ul style="list-style-type: none"> <li>-Continuous caster water spray exhaust (P902)</li> <li>-Caster tundish preheaters (Z005, Z006)</li> </ul>	-Contact cooling wastewater (005)
86-Inch Hot Strip Mill	<ul style="list-style-type: none"> <li>-Scale</li> <li>-Hot strip mill wastewater treatment plant sludge</li> <li>-roll grindings swarf</li> <li>-waste oils</li> </ul>	<ul style="list-style-type: none"> <li>-No. 1 slab furnace waste heat boiler (P011)</li> <li>-No. 2 slab furnace waste heat furnace (P010)</li> <li>-No. 3 slab furnace waste heat boiler (P009)</li> <li>-No. 4 slab furnace waste heat boiler (P012)</li> <li>-Hot strip mill (Z015)</li> <li>-Slab scarfer/slitter (F015)</li> </ul>	<ul style="list-style-type: none"> <li>-Descaling wastewater (005)</li> <li>-Contact cooling wastewater (005)</li> <li>-Indirect cooling wastewater</li> <li>-Stormwater</li> </ul>
Cold Rolling Mill	<ul style="list-style-type: none"> <li>-Scale</li> <li>-Wastewater treatment plant sludge</li> <li>-Roll grindings - swarf</li> <li>-waste oils</li> </ul>	<ul style="list-style-type: none"> <li>-No. 3 cold Mill (P065)</li> <li>-CSM roll shop shot blaster (P089)</li> </ul>	<ul style="list-style-type: none"> <li>-Contact cooling wastewater (641)</li> <li>-Stormwater (004)</li> </ul>
Batch Annealing Furnaces		<ul style="list-style-type: none"> <li>-No. 84 anneal - 75 stands (B021)</li> <li>-Open coil anneal - 39 stands</li> <li>-No. 64 anneal - 123 stands (B023)</li> <li>-No. 94 anneal - 124 stands (B026)</li> </ul>	

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Temper Mills	-Roll Grindings - swarf -waste oils		-Contact cooling wastewater (614 or 641)
HCl Pickling Lines Nos. 4 and 5	-Spent Pickle Liquor (K062)	-No. 4 pickler fume exhaust (P024) -No. 5 pickler fume exhaust (P023)	-Pickling Rinse water (641) -Scrubber wastewater (641)
Continuous Annealing Hot Dip Galvanizing Line (Zinc Grip Line)	-Spent pickle liquor (K062)	-No. 3 coating line (P062)	-alkaline cleaning and pickling rinse wastewaters (614) -scrubber wastewaters (614)
Continuous Annealing Hot Dip Aluminized Line		-No. 4 coating line (P019)	-rinsewaters from line (641)
Electrogalvanizing line	-Spent pickle liquor (K062) -Wastewater treatment sludge (F006)	-No. 2 electrogalvanizing line (P062)	-Pickling rinsewaters (641) -Scrubber wastewater (641) -Plating Wastewaters (642)
Terne Coat Line	-Spent pickle liquor (K062) -Terne flux skimmings (D008)	-Terne coat line (P049)	-Alkaline cleaning and pickling rinsewaters (614) -scrubber wastewater (614) -quench wastewater (614)
Boiler House		No. 2 Boiler House: -No. 1 Boiler (B007) -No. 2 boiler (B010) -No. 3 Boiler (B009) -No. 4 Boiler (B008)	-Boiler blowdown -Noncontact cooling water -Stormwater
General Plant	-Waste cleaning solvents -Waste lead acid batteries -Waste paint -PCB waste material -Asbestos waste material -Used oil and oil filters -Waste wood, paper tires -Demolition waste and general debris -SPCC pond dredgings	-Roads and parking areas (F001) -Raw material storage piles (F002): BOF slag, metallurgical coal, sinter ore, sinter, taconite pellets, coke, hot bricketted iron -Landfill (F020) -Gasoline dispensing (G001) -Misc. spray painting (K001)	-Stormwater (various outfalls) -Groundwater -Sanitary wastewater (city)

AK5 0005430





**United States Environmental  
Protection Agency**

RELEASED  
DATE 12/4/18 Region 5  
BIN # 2018-004681  
INITIALS DW

February 14, 2000

DE-9J

**MEMORANDUM: FOIA EXEMPT/ATTORNEY-CLIENT PRIVILEGE; Prepared in  
Anticipation of Litigation**

**SUBJECT:** Site Visit to AK Steel, Middletown, Ohio  
ID No.: OHD 004 234 480

**FROM:** Michael J. Mikulka  
Environmental Engineer

A handwritten signature in dark ink, appearing to read "Michael J. Mikulka".

**TO:** Robert Guenther  
Assistant Regional Counsel

On February 10, 2000, a site visit to AK Steel was made by staff from the Waste, Pesticides and Toxics Division, Enforcement and Compliance Assurance Branch. Lisa Geist and I represented U.S. EPA during the site visit. We were guided throughout the site visit by Carl Batliner, AK Steel, and accompanied by six staff from Ohio EPA's Southwest District Office: John Spitler, Division of Surface Water (DSW); Mary Osika, DSW; Amy Gibbons Bohler, Division of Emergency and Remedial Response; Mike Joseph, Division of Hazardous Waste Management (DHWM); Tim Hull, DHWM; and Tim Staiger, DHWM.

The intended purpose of the visit was to evaluate current operations to ascertain if additional emergency measures were necessary to curtail the discharge of PCBs to Monroe Ditch and Dick's Creek; and to evaluate past or current hazardous waste management practices which have had or may have had releases of hazardous substances to the environment, and support a claim under Section 3008(h) of RCRA. Field notes were taken by Mike Mikulka, and all photographs were taken by Lisa Geist. A copy of the photos taken are attached.

**Entrance Interview**

Mr. Batliner explained a major change to the AK operations which impact the above stated purpose. AK has now changed its kish pot cooling process from a full water quench to a partial water quench and air cooling of the kish. This has reportedly substantially reduced the amount of water used, and has hence reduced the potential for releases of PCBs or other pollutants to the environment. This process change has coincided with the hiring of





Olympic Mill Services as AK's new slag and other residuals processing contractor. Water use is reportedly down from up to 200,000 gallons per day to about 20,000 gpd, with 100% recycle.

## Site Visit

### Spent Pickle Liquor Injection Wells

We proceeded to various locations at the facility. The first location was spent pickle liquor (SPL) injection well No. 1 (see photo #1-1), which is located in the South Plant area. This well has previously been identified as the PRC PR/VSI as Solid Waste Management Unit (SWMU) #35. The same numbering system will be used in this report. SPL is listed as hazardous waste K062 at 40 CFR 261.32, and is listed due to being both corrosive and toxic. Appendix VII to Part 261 identifies the basis for listing K062 as containing hexavalent chromium and lead. AK has an underground injection control (UIC) permit for this well issued by the Ohio EPA.

We entered the building to see the well and ancillary equipment there. There is a sump about 10 feet from the well which contained liquid. Mr. Batliner did not know if the material was SPL or water. A hose from the SPL line was placed within the sump. The purpose of the hose is to drain SPL from the feed line to the well into the sump. This is reportedly used when AK has to conduct testing on the well annually as required by the UIC permit. This sump is a potential point of release for SPL to the environment. The SPL piping within the building is all single-walled. Mr. Batliner said that all the SPL piping was single-walled until about 2 years ago, when double-walled piping with a visual observation port was installed. (See photos #1-2, 1-3 and 1-4.) Mr. Batliner stated that the well was installed about 1969, and is about 3000 feet deep. SPL is injected into both wells at a combined rate of about 30 gpm.

We proceeded to SPL injection well No. 2, which is located several hundred yards east of SPL well No. 1. This well has been previously identified as SWMU #36. The building which houses well No. 2 is similar to that which houses well No. 1. A wet area was observed around well No. 2. Mr. Batliner said that a large quantity of oil was used in these wells outside the injection casing. When this is maintained, oil gets out. The material could be oil.

### Spent Pickle Liquor Storage Tanks

The facility maintains hazardous waste storage tanks for SPL. These tanks are regulated under 40 CFR 265 as less than 90 day storage tanks. A filtering system is also operated and maintained by AK, for filtering the SPL prior to storage. There are 3 storage



tanks for SPL, and all are located at the South (waste water) Treatment Plant, which is the main treatment plant for the South Plant area. See photo #1-5. The SPL tanks farm has been identified as SWMU #33, and the filtering system as SWMU #34. Both are still in use. The main storage is provided by 2 x 75,000 gallon tanks, with secondary containment. The 3<sup>rd</sup> tank (labeled the Ashland Tank) is used only when AK must send SPL off-site, for whatever reason. It also has secondary containment, adjacent to and tied in with the containment system for the other 2 tanks, with a drain hole which may be a possible SPL release point. This 3<sup>rd</sup> tank is a 9,000 gallon tank used to dispense SPL to tank trucks. A separate concrete loading apron is under this tank loading area, but a break in the secondary containment was noted where a pipe goes underground. This, along with over-splash, is a possible release point for spilled SPL to the environment. It is noted that the South Treatment Plant effluent discharges to a pond which discharges to plant outfall #004, which is on the North Branch of Dick's Creek.

#### Coal Pile Area Where K087 Previously Managed

We proceeded to the coal pile area where coal tar decanter sludge from AK's coke making operations was previously managed, reportedly from 1983 to 1990. This area is located in the Melt Plant area, and was previously identified as SWMU #17. Coal tar decanter sludge from coke making operations is listed as hazardous waste K087 at 40 CFR 261.32, and is listed due to being toxic. Appendix VII to Part 261 identifies the basis for listing K087 as containing phenol and naphthalene. Photos #1-7 and 1-8 show the area within the current coal pile storage area where AK previously mixed K087 sludge with coal prior to recycling in the coke plant. It is now mostly level ground consisting of what appeared to be coal fines and some soil. The area is now undergoing RCRA closure for the illegal K087 waste pile under a closure plan approved in 1998 by the Ohio EPA. According to Mr. Batliner, a small area which is currently beneath an adjacent coal pile has been identified as being high in benzene. He said they were planning to further delineate the extent of contamination, excavate it, and dispose of the material as K087 waste. According to Mr. Batliner, the borings that were taken to identify the extent of contamination were required to be at least 48 inches. In the borings that were taken by AK (up to 20 feet deep), no ground water was encountered. In walking to and from the area, our shoes became covered with oily coal fines. There were many areas within the coal pile storage area where oil was observed to be present in the soil/coal fine mixture. See photo #1-6.

#### Coke Oven Gas Release

We proceeded next to the area where a coke oven gas release occurred from a break in a coke oven gas pipeline at the western end of the Coke Plant area. This area was not previously



identified as a SWMU during the PR/VSI. It is located adjacent to the AK property line close to where AOC 6 is located. A pipeline leak during winter migrated in 3 homes in the vicinity of the AK property line, and 3 families were evacuated after the fire department recorded high carbon monoxide (CO) and benzene in the homes. The families were permanently relocated and the homes were demolished. AK installed monitoring wells, recovery wells and a soil vapor extraction (SVE) system to recover the coke oven gas and distillate. Photos #1-9, 1-10 show the area where this occurred, and also show the SVE piping, which has since been dismantled, laying on the ground surface. AK also removed the coke oven gas pipeline. 6 extraction wells currently operate, and the water purged from the ground (containing benzene, toluene and xylene) is treated through a carbon filter system, with the treated effluent going to the City of Middletown POTW. According to Mr. Batliner, about ½ gpm is the flow rate for the extraction wells, in aggregate. Mr. Batliner stated that AK has since bought the remaining homes on the same side of Ottawa Street, and is planning on demolishing them.

At this point, the 3 state staff from the DHWM had to leave, and we broke for lunch.

#### Slag (and other material) Processing Area

We arrived at the Slag Processing Area, which is the area of the plant located south of Oxford State Road. It is a large area, with a separate entrance. The area is currently operated by Olympic Mill Services, since January 31, 2000. The former contractor, International Mill Services (IMS), was observed to be in the process of removing equipment from the site. We were joined on this portion of the site visit by Mr. Keith Pyles, Manager, Technical Services, for Olympic. According to Mr. Pyles, the IMS contract expired in August of 1999, and IMS had been operating the slag processing area since that time on a month-to-month basis. The new contract was awarded to Olympic, after a bidding process.

We proceeded to the area where the kish pot quenching operation was located.

Under the former operation which reportedly began in 1997, kish pots were brought by kish pot truck (a specially-designed vehicle) to one of 5 quench stands. See photos #1-11, 1-12, and 1-15. Water diverted from Outfall #002 was sprayed onto the kish pots to cool the kish. The water ran off during the spraying operation and also when the pots were dumped and seeped into the ground. This created a hydraulic head on the ground water, according to the report prepared by Arcadis Geraghty and Miller, and flushed water containing PCBs (from historical operations) towards the landfill tributary also known as Monroe Ditch, and possible northward towards Dick's Creek. Seeps were observed discharging from the slag processing area in the vicinity of what has been identified as



SWMU #40, into the landfill tributary. After the seeps were sampled and identified as being both high pH (which turned the creek white upon mixing) and containing PCBs, IMS, the former contractor, constructed a trench system to recycle the collected quench water back to the quench stands rather than discharging it via seepage into the ground water. This system is still in operation, and was observed to be essentially a system of erosion channels and gulleys, the terminus of which contains a pipe which drains back to the slag processing area pump house so the water can be recycled.

Under the new system, a steel frame pole barn type structure has been erected, with 2 sides and a roof, a big sliding back door, and no front door. See photo #1-13. The process was described by Mr. Pyles as follows: A kish vehicle arrives at the building, and the water spray at the front door of the building is activated. The purpose of the water spray is not to cool the material, but to control air pollution from the dumping of the pot and subsequent handling. The pot is dumped and then allowed to air cool. The empty kish pot is placed outside to air cool (see photo #1-14). Upon cooling, a front end loader moves the cooled material outside to a kish storage/processing area where it awaits further processing steps by Olympic designed either to allow recycle or sale. During the visit, water was observed to be continuously sprayed from quench stand #1 and a trickle from quench stand #2. Mr. Pyles said that they must continuously run some water through these stands, as this keeps the pump for the area primed and ready to go when the water spray at the entry to the cooling building must be activated. They are working on a method to correct that such that the continuous water spray at the quench stands can be eliminated. Photos #1-16 through 1-21 show that this creates a large amount of water which flows to the re-circulation trench/pit system unnecessarily. All the water which gets to the pump house is reportedly recirculated for use somewhere within the slag processing area.

#### PCB Seep Area and Waste Water Treatment Plant

We proceeded to the PCB seep area located adjacent to the landfill tributary. This area is located between SWMUs #39 and 40. The trench constructed in late 1997, early 1998 was built to collect groundwater which would otherwise have been diverted to the landfill tributary, and divert it to a sump. A view of this sump can be seen in photos #2-1 and 2-5. The 2 pipes at the left were initially constructed, but were found to be inadequate, as seepage was still observed. An additional trench was then constructed at a lower elevation and an additional pipe was added. The third pipe is about 12 to 18 inches below the elevation of the first two pipes. No seepage has reportedly been seen since that time. No seepage was observed during the site visit, but we did not walk the complete length of the landfill tributary. The width of the tributary was visually estimated at 6 feet. The water in the





tributary was observed to be clear, with some scum on the surface at a flow obstruction just downstream of the sump. Photos #2-2 through 2-4, and #2-6 through 2-8 show the landfill tributary and surrounding area.

A flexible hose is hung in the sump, and used to pump water collected in the sump up to one of 2 frac tanks located at the top of the embankment. There are a total of 4 such tanks, with two used for storage of waters collected from the sump, and two used for storage of treated effluent from the carbon systems. The frac tanks and carbon systems can be seen in photo #2-10. Mr. Batliner said that the PCB in the influent to the system was holding steady at a few micrograms per liter, with non-detects in the effluent. After treatment, the treated effluent is pumped back to the pump house for the slag processing area, and recycled for kish pot or slag quenching or other water usage at the slag processing area.

We drove over to the pump house. See photo #2-9 for a view of the piping, and photo #2-11 for a view of the pump house. The pump house is located adjacent to Dick's Creek, just across from Outfall #002. Photos #2-12 and 2-13 show Dick's Creek and Outfall 002 at this point.

We went back to the kish pot area, and had apparently just missed a dump. We left the slag processing area.

#### Dick's Creek at Slag Processing Access Road

We stopped at Dick's Creek as we were leaving the slag processing area, where the road crosses the creek, which is just to the east of SWMU #41. A few photos were taken. See photos #2-15 through 2-18. The water appeared to be clear with no visible sheen.

#### Exit Interview

This concluded the site visit, and we thanked Mr. Batliner for the tour, and departed the facility.

#### Dick's Creek at Yankee Road

We stopped at Yankee Road where a bridge crosses Dick's Creek. This location is west of the facility and west of the confluence of the landfill tributary, and is about 1000 feet west of SWMU #38, a closed solid waste landfill. Photos #3-1 through 3-3 show the appearance of Dick's Creek at this location. The width of the creek was measured at the upstream end of the Yankee Road bridge, and was found to be about 48 feet. The water appeared to be clear with no visible sheen. There were warning signs posted at this location that the water was unsafe for fishing or swimming.



### Dick's Creek Near Amanda Elementary School

Further downstream, there is an elementary school located on the north side of Dick's Creek. We parked in the parking area behind the school, and proceeded across the football field to Dick's Creek. There is access to the creek at this point from the school property, and there is no fencing or posted warning signs about the water quality. Photos #3-4 and 3-5 show the appearance of Dick's Creek at this location. The width appeared to be greater than at Yankee Road, but less than 75 feet across. There was evidence of beaver with a number of gnawed trees adjacent to the creek. The water appeared to be clear with no visible sheen. Photo #3-6 shows a view of Amanda Elementary School as seen from about 25 yards from Dick's Creek.

### Confluence of Dick's Creek and North Branch of Dick's Creek

The last stop was an area just upstream of the confluence of Dick's Creek and the North Branch of Dick's Creek. This is located upstream of any known source of PCB contamination. A great blue heron took off as we arrived. Photos #3-7 through 3-11 document the appearance of this area. The water appeared to be clear with no visible sheen.

### Exit Interview With OEPA Staff

Due to the timing, we were not able to return to brief OEPA management. OEPA staff advised us that an OEPA/DOJ meeting had been scheduled for February 22, 2000, at OEPA's SWDO. OEPA staff inquired about cost recovery for the state under the pending action. We advised that such claim could be made if we knew the mechanism by which the state were to receive the funds. We also advised that our current deadline for response to DOJ was February 18, 2000.

### Conclusion

AK Steel is a large integrated steel processing facility which has managed hazardous waste in the past, and continues to manage hazardous waste. Its recent operations have caused an imminent and substantial endangerment, which continues. Past operations have subjected AK Steel to the corrective action requirements of RCRA, either through the UIC permit, or via an order under Section 3008(h).

### Recommendation

It is recommended that we continue to develop an action under both Section 7003 and Section 3008(h) as independent claims under the planned civil judicial action. Both preliminary and permanent relief should be sought as part of that case. That relief will be outlined in the civil referral package.



## Photographs

Facility: AK Steel  
1801 Crawford St.  
Middletown, Ohio 45043

ID Number: OHD 004 234 480

Date: February 10, 2000

Time: 9:30 am - 3:30 pm

Photographer: Lisa Geist, U.S. EPA

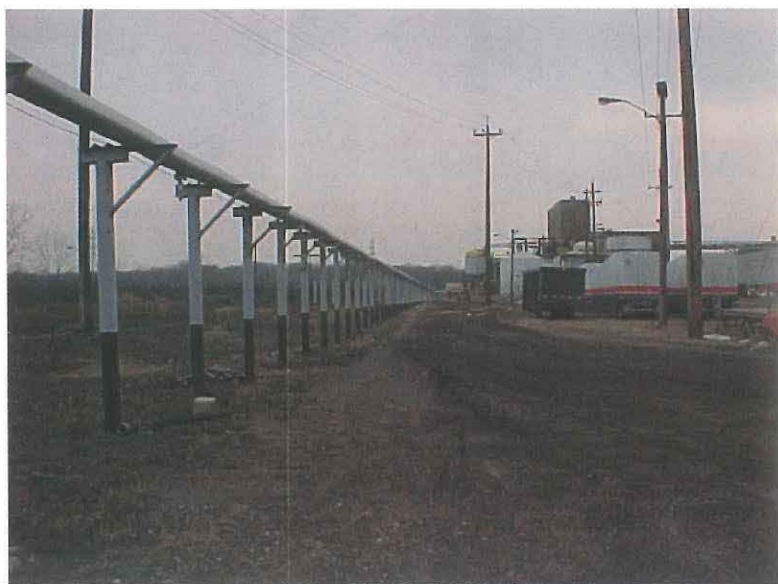
Equipment: SONY Mavica, MVC-FD73, digital camera

Conditions: Overcast, some light rain, temperature around 40 degrees.



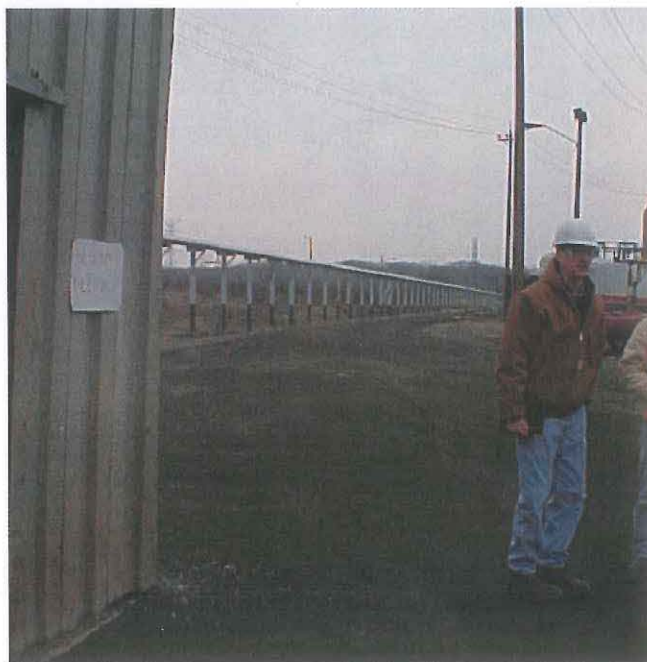


#1-1 Spent Pickle Liquor Deep  
Injection Well #1 Building  
(SWMU 35)



#1-2 SPL piping, double walled,  
from SPL storage tanks

#1-3 SPL Well #1 Building  
and associated piping









#1-4 Monitoring port, SPL double walled piping



#1-5 SPL tank storage system (SWMU 33) located at south treatment plant (SWMU 28)

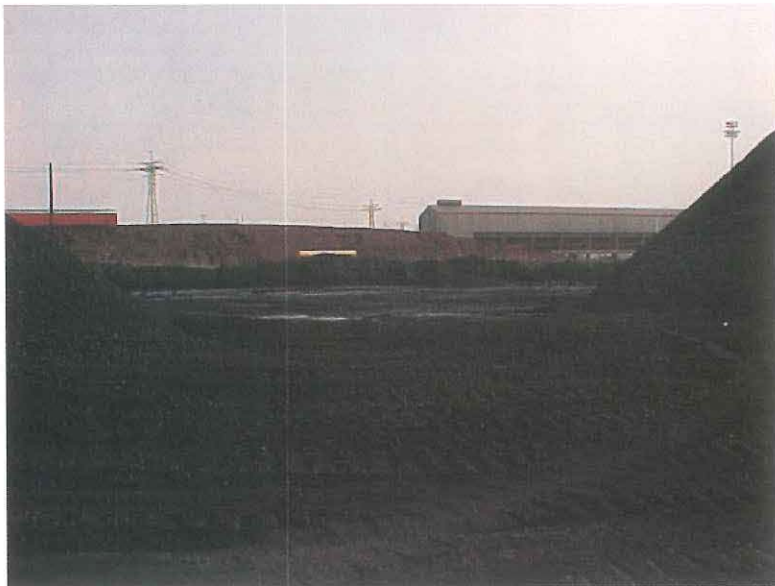


#1-6 Coal pile area, note oily sheen on water





#1-7 Coal pile adjacent to area above, K087 waste was previously mixed with coal



#1-8 Area where K087 waste was disposed historically (SWMU 17)



#1-9 Coke oven gas release area, looking northwest towards residential area, with dismantled SVE piping on ground



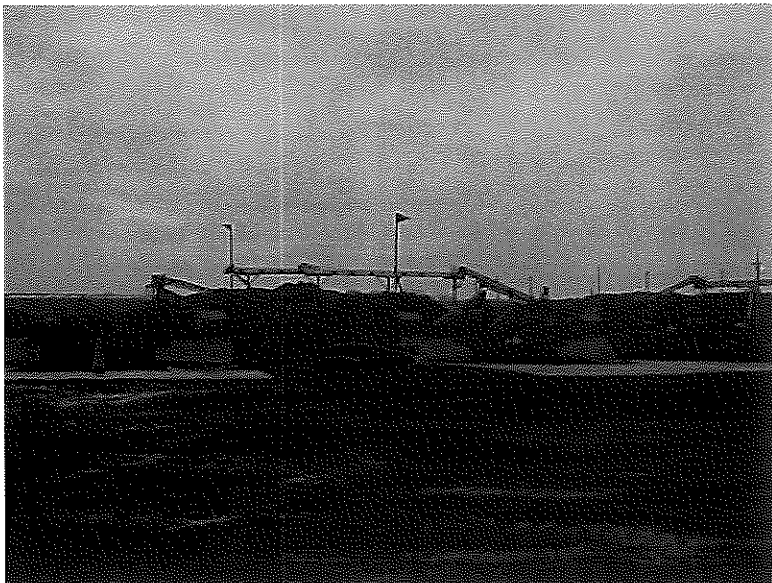




#1-10 Coke oven gas release area, looking west towards residential area (Ottawa Street), with dismantled SVE piping on ground



#1-11 Former kish pot quenching area, view north, showing quench stands

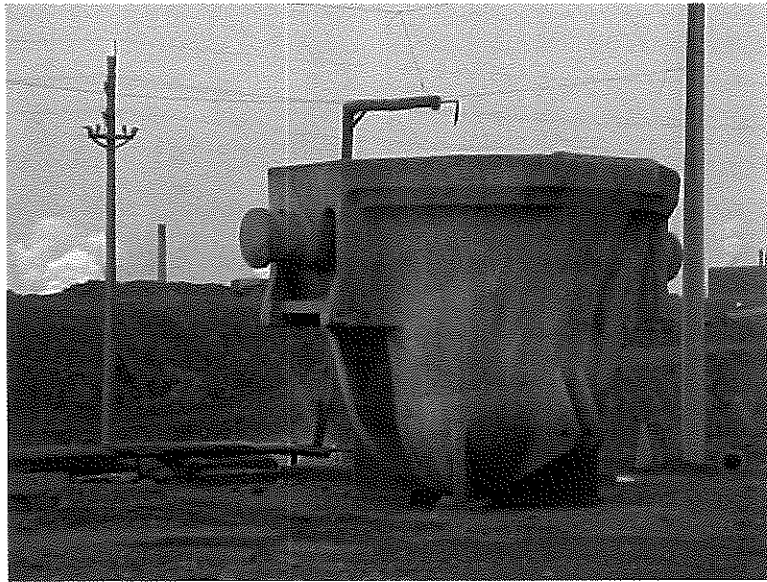


#1-12 Former kish pot quenching area, view west, overlooking slag processing area

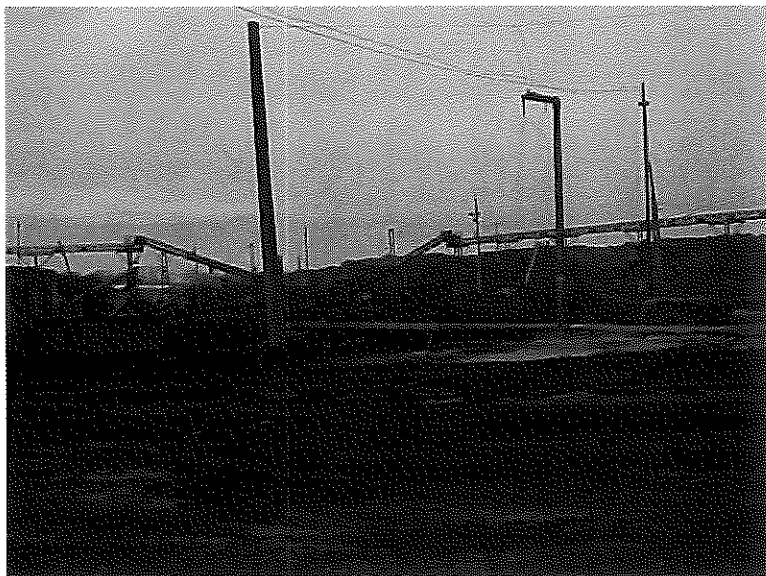




#1-13 Current kish pot  
quenching/cooling area,  
view east into new building



#1-14 Kish pot quenching area,  
view north-northeast, empty  
kish pot



#1-15 Former kish pot quenching  
area, view northwest



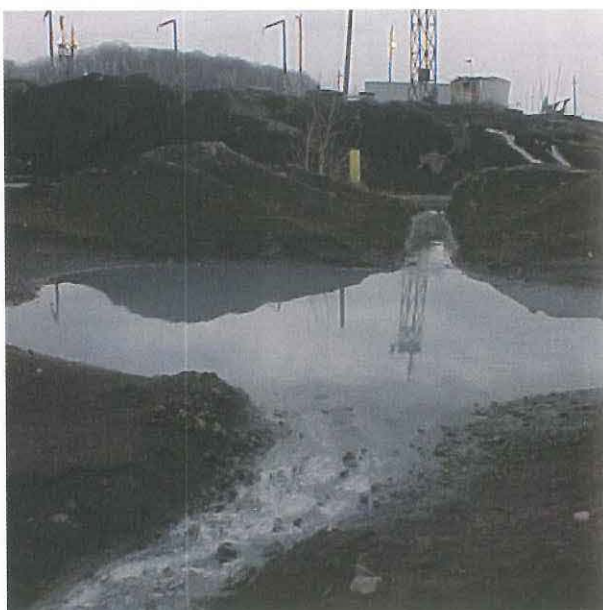




#1-16 Water runoff from kish pot quenching area, viewed from below, facing uphill and south



#1-17 Water runoff from kish pot area, note white milky color



#1-18 Overall view of water runoff from kish pot area, view south





#1-19 Water runoff from kish pot area, view southeast



#1-20 Water runoff and sump collection pit below kish pot area



#1-21 Water runoff from kish pot area, view south







#2-1 PCB trench system - sump, view south



#2-2 Monroe Ditch adjacent to PCB trench system, view south (upstream)



#2-3 Monroe Ditch and SWMU #39, view west from PCB trench system





#2-4 Monroe Ditch adjacent to PCB trench system



#2-5 Inside PCB water collection sump for trench system, note 3 pipes draining system about 6-8 feet below grade



#2-6 Sign posted adjacent to PCB trench and sump







#2-7 Monroe Ditch, adjacent to PCB trench area, view north (downstream)



#2-8 Monroe Ditch, adjacent to PCB trench area, view south (upstream)



#2-9 Piping transporting treated water from PCB water treatment system to pump house, view north towards closed landfill (SWMU 38)





#2-10 Inside PCB water treatment system area, 2 carbon filters shown on left



#2-11 Pump house which receives treated PCB water, distributes water to slag processing area



#2-12 Dick's Creek and outfall 002 (across creek), view north - northwest from Pump house







#2-13 Dick's Creek, view north  
from Pump house



#2-14 Stairway at Pump house



#2-15 Dick's Creek, view east  
from Slag processing area  
non-responsive road





#2-16 Dick's Creek, east side of  
Slag processing area access  
road, view northeast



#2-17 Dick's Creek, west side of  
Slag processing area access  
road, view west



#2-18 Dick's Creek, view west  
from Slag processing area  
access road







#3-1 Dick's Creek, view east-northeast, from Yankee Road, creek width about 48 feet



#3-2 Dick's Creek, view west towards Yankee Road



#3-3 Dick's Creek from Yankee Road, view west, including USGS gaging station on north side of creek





#3-4 Dick's Creek, view south, from north bank, behind Amanda Elementary School



#3-5 Dick's Creek, view south, from north bank, behind Amanda Elementary School, Oxford Rd.



#3-6 View north from Dick's Creek, across fields towards Amanda Elementary School, Oxford Rd.







#3-7 Confluence of North Branch of Dick's Creek with Dick's Creek, view southwest

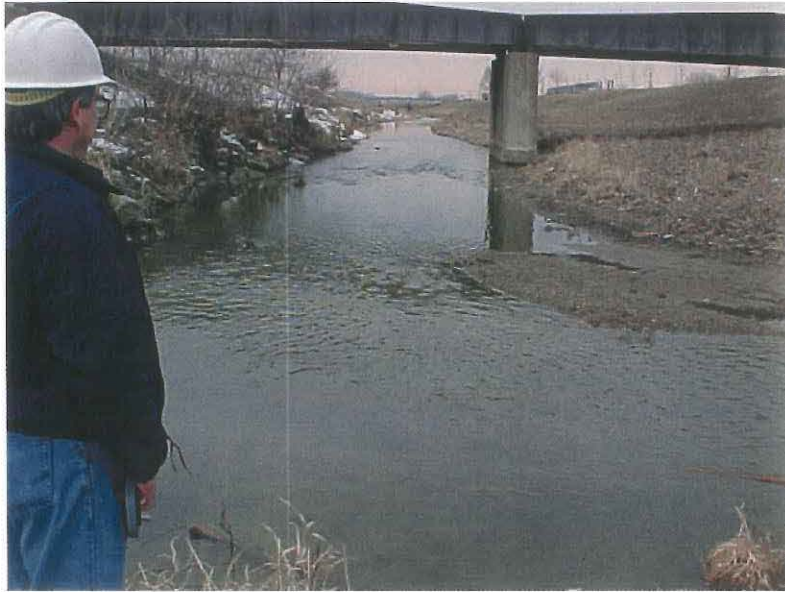


#3-8 Confluence of North Branch with Dick's Creek, view southwest



#3-9 Dick's Creek, view east, upstream of confluence with North Branch of Dick's Creek





#3-10 Dick's Creek and North Branch, view west



#3-11 North Branch of Dick's Creek, view north towards outfall 004





Robert Guenther

02/22/2000 05:10:20 PM

To: Lisa Geist/R5/USEPA/US@EPA, Michael Mikulka/R5/USEPA/US@EPA

cc:

Subject: FW: AK issues

----- Forwarded by Robert Guenther/R5/USEPA/US on 02/22/2000 05:10 PM -----



PRLee@enrd.usdoj.gov on 02/12/2000 02:27:25 PM

To: RDarnell@enrd.usdoj.gov, Robert Guenther/R5/USEPA/US@EPA, Kris Vezner/R5/USEPA/US@EPA

cc:

Subject: FW: AK issues

RELEASED  
DATE 12/4/18  
RIN # 2018-024691  
INITIALS JG

PRIVILEGED CORRESPONDENCE

Rob/ Kris -- the attached was sent by the state for our meeting. Tom B. and Mike M. should take a look at this before our conference call next week on Wednesday. We can then discuss whether our requirements are similar.

by  
2/12/00

-----Original Message-----

From: Kimberly A. Rhoads

Sent: Thursday, February 10, 2000 7:31 AM

To: 'pamela.r.lee@usdoj.gov'

Subject: FW: AK issues

Pam - I'm trying to send this again as I got a notice that you did not receive it yesterday.

-----Original Message-----

From: Kimberly A. Rhoads

Sent: Wednesday, February 09, 2000 3:52 PM

To: 'Pam.R.Lee@usdoj.gov'

Cc: Robert J. Karl; 'randy.bournique@epa.state.oh.us';

'mary.osika@epa.state.oh.us'; 'jeanette.smith@epa.state.oh.us';

'harold.oconnell@epa.state.oh.us'

Subject: AK issues

Pam:

Please find attached two documents. The first is an Ohio EPA document (in WP) entitled "Ohio Corrective Action Plan" (3/97 policy) that is usually provided to companies as a guidance document. The second is Ohio's list of issues to negotiate in the settlement of the "global" AK enforcement case. Please let Lori or I know if you have any questions about

RELEASED  
DATE  
BY  
INITIALS

either of these documents prior to our teleconference on Friday.

<<Corrective Action Plan Attached >>

State=s Proposed Options for Resolution of Issues at AK Steel Middletown Site

General description of settlement options:

The main components of the two options the State proposes are that AK:

A. Perform: (1) Ainterim measures@, (2) Aother enforcement case issues@ and (3) Asite-wide corrective action@; or

B. Perform: (1) Ainterim measures@ and (2) Aother enforcement issues@ with a reservation of the State=s authority to seek, site-wide corrective action at a later date (based on the federal or state program).

Interim measures:

The Ainterim measures@ would include an agreement and injunction to:

1. Continue to eliminate seepage (of ground water contaminated with PCBs and/or other waste material) to surface waters of the State in the area presently known. More specifically:

a. Operate and maintain a system continuously to prevent seepage, i.e., monitor the effectiveness of the installed trenching and interim treatment system, including filter condition and treated (effluent) water;

b. Assess whether the practices of reuse of the treated water in IMS operations and for dust control is concentrating PCBs in soil or other media; and

c. Prevent any treated water from entering surface water unless permitted.

2. Eliminate seepage to waters of the State in areas where it may occur in the future.

3. Inspect, at least weekly, for evidence of seepage, or impacts from seepage, to surface waters, i.e., Dicks Creek and its landfill tributary (a.k.a. Monroe Ditch), and continue to inspect until the source of PCBs/waste material seepage is eliminated or remediated.

4. Monitor, at least quarterly, for possible impacts from seepage on water quality (see also Aother enforcement issues@ below).

Other enforcement issues:

The Aother enforcement issues@ would include an agreement and injunction to:

1. Conduct an additional investigation of biological and water quality conditions in Dick's Creek, including, but not limited to, the presence of PCB's in Dick's Creek and contamination in the area of Monroe Ditch and the AK landfill (attributed to the slag operations).

2. Remediate per the results and conclusions in #1.

3. Perform water quality and biological monitoring, namely:

AVAZ UNDER

7003

3008(h)

A1

A3

A1

✓ ✓  
✓ ✓

WHY WORRIED IF PCBs ARE NO?

CWA  
A GIVEN CWA → A 1000, ELIMINATE

✓ ✓

CWA

✓ ✓  
✓ ✓



7003

3002(h)

a. Conduct instream biological monitoring of the Great Miami River (appropriate to AK's outfalls), Dicks Creek and tributaries, through an Ohio EPA approved sampling and analysis plan (AAquatic Life SAP@)--by July 30, 2001 and annually thereafter through the year 2011:

✓

i. evaluate attainment status of aquatic life uses and health of aquatic environment based on biological criteria provided by Ohio Adm. Code 3745-1-07, table 7-14--Index of Biotic Integrity (IBI) (based on fish communities), the Modified Index of Well-Being (MIWB) (based on fish community health characteristics), Invertebrate Community Index (ICI) (based on macro invertebrate communities), and

✓

ii. evaluate, simultaneously with each annual aquatic life attainment status evaluation, the aquatic habitat of Dicks Creek in accordance with the Qualitative Habitat Evaluation Index (QHEI). Submit reports of annual evaluations.

✓

b. Sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dicks Creek and tributaries through an Ohio EPA approved sampling and analysis plan (Fish Tissue SAP@)--by July 30, 2001 and annually thereafter through the year 2011 for presence of and any impacts from waste materials, e.g., PCBs, PAHs/BNAs, and heavy metals. Submit reports of annual evaluations.

✓

4. Prevent spills and eliminate other unauthorized discharges to waters of the State--

a. Prevent spills and other unauthorized discharges from reaching waters of the State.

✓

CWA

b. Each spill or unauthorized discharge event to waters of the State would be subject to stipulated penalties, where payment of such penalties would not release AK from any other obligations related to the event or limit the State's authority to seek additional relief or civil penalties for the event.

✓

CWA

c. Re-evaluate and include within the best management practices (ABMP@) plan(s) for the site the identification, mapping and assessment of the adequacy of: subsurface drains, sewers, sumps, and piping; raw materials, intermediate materials; product and waste storage and disposal areas; storm water drainage pathways; likely spill migration pathways; tank dikes, storage and material handling practices; and the potential for spills in loading docks and rail siding areas. Submit the revised BMP plan to Ohio EPA (where submission of the revised plan would not release AK from its obligation to eliminate unauthorized discharges or prevent spills to waters of the State). Implement the revised BMP plan.

CWA

d. Conduct personnel training and refresher courses on spill and unauthorized discharge prevention, such that personnel are able to effectively prevent and respond to spill or other unauthorized discharge events to waters of the State. Such training would be to familiarize site personnel with non-responsive procedures, equipment and systems, including: procedures for using, inspecting, repairing and

CWA

RCRA



replacing facility emergency and monitoring equipment; key parameters for automatic product or waste feed cut-off systems; communications or alarm systems; response to ground water contamination incidents; and shutdown of operations. Maintain records of personnel training conducted until the cessation of operations at the site.

5. Comply with the effective NPDES permit for the site (and any renewals or modifications of the permit) and R.C. Chapter 6111.

CWA

6. Pay a civil penalty for past violations of R.C. 6111 and 3734 and rules adopted under those chapters. The civil penalty payment would be mitigated in part by an agreed-to supplemental environmental project, namely, the acid regeneration pollution prevention project.

RCRA  
SEP

7. Pay stipulated penalties for future violations (where payment of such penalties would not release AK from its other obligations related to the violation or limit the State's authority to seek additional relief or civil penalties for the violation).

CWA  
RCRA

8. Various Astandard@ consent order clauses would also apply, including, but not limited to, for AK to provide a copy of the consent order to its contractors; for AK pay for the required public noticing of the consent order before its entry by the court; and for AK to pay courts costs related to filing the settlement.

Site-wide corrective action:

ASite-wide corrective action@ means the overall process explained in Ohio=s CAP, as tailored to the site. This site-wide corrective action would also include groundwater issues.

PARTIAL  
CWA  
§ 703  
PWA

✓

-----  
From: Angela Scott-Owens <angela.scott-owens@epa.state.oh.us>  
To: Jeanette Smith <jeanette.smith@epa.state.oh.us>  
Subject: Corrective Action Plan Attached  
Date: Tue, 8 Feb 2000 14:28:25 -0500  
X-Mailer: Internet Mail Service (5.5.2650.21)

<<Correcti.wpd>>



- att1.htm



- Correcti.wpd





## **ATTACHMENT 1**

### **Interim Measures Scope of Work**

## I. Purpose

The purpose of the Interim Measures (IMs) described in this Scope of Work (SOW) is to control or abate potential threats to human health and the environment and/or to prevent or minimize the release or potential release of hazardous wastes or hazardous constituents at or from the Facility prior to completion of the RCRA Facility Investigation (RFI) and the Corrective Measures Study (CMS) required by the Consent Decree. AK Steel shall implement the Interim Measures described herein in accordance with the requirements of the Consent Decree, this SOW, the approved Interim Measures Workplan(s), and any other plans approved by EPA pursuant to this SOW. AK Steel shall furnish all personnel, materials and services necessary for, or incidental to, performing the IMs.

## II. Scope

AK Steel shall implement all Interim Measures described in this SOW in accordance with the Interim Measures Workplan(s) required in Section III, Part 1, below; the Health and Safety Plan required in Section III, Part 2, below; the Interim Measures Design Program required in Section III, Part 3, below; the Interim Measures reporting requirements set forth in Section III, Part 4, below; and the Schedule set forth in Section III, Part 5, below.

The Interim Measures to be implemented by AK Steel pursuant to this SOW shall include the following:

1. Dicks Creek floodplain soil sampling and analysis. AK Steel shall collect and analyze soil samples from the Dicks Creek floodplain in accordance with the Floodplain Soil Sampling and Analysis Plan approved with conditions by EPA on March 21, 2005.
2. Excavation and proper disposal of any Dicks Creek floodplain soils containing more than 5 mg/kg of polychlorinated biphenyls (PCBs), as demonstrated during implementation of the approved Floodplain Soil Sampling and Analysis Plan, approved with conditions by EPA on March 21, 2005. Excavation of floodplain soil may require pre-construction notification of the United States Army Corps of Engineers ("USACE") and, as appropriate, a permit under section 404 of the CWA, and certification from OEPA pursuant to section 401 of the CWA. AK Steel shall submit to OEPA a Notice of Intent for coverage under the General Construction Activity Storm Water Permit.
3. Delineation, containment and recovery of free product in the vicinity of Monitoring Well MDA-33S. AK Steel will conduct a supplemental investigation in accordance with the provisions of the approved Uplands Sources Sampling and Analysis Plan (soil borings and temporary wells, groundwater monitoring and analysis) to delineate the nature and extent of free product in and around MDA-33S. AK Steel will contain and recover free product in the vicinity of monitoring well MDA-33S near Monroe Ditch by constructing a sheet pile barrier to prevent the migration of free product into Monroe Ditch, installing recovery wells at each end of the sheet pile containment barrier, periodically checking the wells for free product in accordance with the approved Operation and Maintenance (O&M) Plan, and removing any free product in the manner described in the approved O&M Plan. The sheet piling used to construct the containment barrier will be anchored into the underlying clay unit (the clay unit noted on the MDA-33S boring log to be at a depth of approximately 11 feet) with care to prevent breaching of the clay. The soil borings and temporary wells and sentinel/recovery wells shall be

installed/screened such that the bottom of the boring/well screen interval penetrates into the underlying till. Operation and maintenance of the installed system shall be described in an O&M Plan to be submitted for review and approval in accordance with Section IX of the Consent Decree. The O&M Plan shall include provisions indicating how frequently AK Steel will check to determine if free product is present in the recovery wells and describing how AK Steel will remove such free product.

IM 3 will be completed as part of the upland source control effort prior to the implementation of IMs 6, 7, and 8.

4. Delineation, excavation and proper disposal of contaminated soils containing more than 5 mg/kg PCBs in the areas described in 4.A - 4.C, below, and, in the case of the area described in 4.C, containing oils, and restoration of the excavated area with clean fill and native vegetation or clean fill and gravel, as applicable.

- A. Soils in the vicinity of AK Steel Soil Sample SS-01 in the slag processing area.
- B. Soils in the vicinity of EPA floodplain soil sample S23 located west of Yankee Road on the north side of Dicks Creek.
- C. Soils in the vicinity of EPA floodplain soil samples S25/S28 located near Orman's Welding on the south side of Dicks Creek.

AK Steel shall delineate any contamination in the area described in 4.A in accordance with the provisions of the approved Upland Sources Sampling and Analysis Plan. AK Steel shall delineate any contamination in the areas described in 4.B & 4.C concurrently with IM 1, and in accordance with the provisions of the Floodplain Soil Sampling and Analysis Plan, approved with conditions by EPA on March 21, 2005.

Excavation of floodplain soil in the areas described in 4.B and 4.C may require pre-construction notification of the United States Army Corps of Engineers ("USACE") and, as appropriate, a permit under Section 404 of the CWA.

IM 4 will be completed as part of the upland source control effort prior to the implementation of IMs 6, 7, and 8.

5. Delineation, excavation and proper disposal of contaminated soils containing more than 25 mg/kg PCBs in the vicinity of AK Steel soil boring BH-08, and restoration of the excavated area with clean fill and native vegetation or clean fill and gravel, as applicable. AK Steel will collect and analyze soil samples in the vicinity of AK Steel boring BH-08 in accordance with the approved Upland Sources Sampling and Analysis Plan.

IM 5 will be completed as part of the upland source control effort prior to the implementation of IMs 6, 7, and 8.

6. Delineation, excavation and proper disposal of sediment and other material from Monroe Ditch, the Outfall 002 Channel and Reach 1 of Dicks Creek. AK Steel shall delineate the lateral and vertical extent of sediment present in the portion of Monroe Ditch on AK Steel's property, in the Outfall 002 Channel and in Reach 1 of Dicks Creek through a combination of depth probing and coring, in accordance with the approved Sediment Delineation Plan. AK Steel shall probe

sediment depth at sufficient intervals to adequately delineate the horizontal and vertical extent of sediment depositional areas. AK Steel shall also collect at least 8 cores in Monroe Ditch and at least 25 cores in Reach 1 of Dicks Creek. Each of these cores shall be advanced to the point of refusal or at least eight (8) feet below the upper surface of the sediments. Nothing in this Paragraph shall be construed to require AK Steel to advance cores into or through bedrock or other rock strata.

In accordance with the approved Sediment Delineation Plan, some cores will be collected initially to verify sediment depth information collected from the depth probings. In addition, samples of the clay or other native material underlying the sediments will be collected from at least 25 cores and analyzed for PCBs in accordance with the approved Sediment Delineation Plan. AK Steel shall delineate the lateral and vertical extent of any areas in Reach 1, the Outfall 002 Channel and Monroe Ditch where PCB concentrations in such clay or other native material underlying the sediment exceed the applicable cleanup standards (i.e., where (1) the spatially-weighted average concentration of PCBs in the clay or other native material exceeds 1.5 mg/kg total PCBs dry weight, or (2) any individual sample of clay or other native material underlying the sediment exceeds 3.0 mg/kg total PCBs dry weight). AK Steel shall create plan view maps as well as cross-sections in order to clearly delineate the cut lines that will be used to excavate sediment and any underlying clay or other native material required to be removed from these areas. Also, access agreements will be required from property owners and approval of the Final Design Documents will be required from state and local transport authorities, appropriate railroad companies and utilities, as necessary.

AK Steel shall excavate and properly dispose of all sediment, as well as any underlying clay or other native material that exceeds the aforementioned cleanup standards in Monroe Ditch, the Outfall 002 Channel and Reach 1, as specified in the approved Final Sediment Remediation Design Document. In each of these areas, excavation work shall proceed from upstream to downstream.

AK Steel shall submit to OEPA applications for an NPDES permit and a Permit to Install ("PTI") for any dredge de-watering treatment and discharge system. This project will require a 401 Water Quality Certification issued from the State of Ohio, even if the USACE determines the activity can proceed under a nationwide permit. The application for the 401 Water Quality Certification shall occur at the same time as all other NPDES and PTI applications required by the Division of Surface Water, Ohio EPA, so that one antidegradation public hearing for all applications can be scheduled for the same date.

7. Delineation, excavation and proper disposal of sediment and other material from Reach 2 of Dicks Creek. AK Steel shall delineate the lateral and vertical extent of sediment to be removed from Reach 2 of Dicks Creek through a combination of probing and coring, as provided in the approved Sediment Delineation Plan. AK Steel shall probe sediment depth at sufficient intervals to adequately delineate the horizontal and vertical extent of sediment depositional areas in Reach 2. AK Steel shall also collect at least 30 cores in Reach 2 of Dicks Creek. Each of these cores shall be advanced to the point of refusal or at least eight (8) feet below the upper surface of the sediments. Nothing in this Paragraph shall be construed to require AK Steel to advance cores into or through bedrock or other rock strata.

In accordance with the approved Sediment Delineation Plan, some cores will be collected initially to verify sediment depth information collected from the depth probings. In addition, samples of sediments or clay or other native material underlying the sediments will be collected

from the cores and analyzed for PCBs as specified in this Paragraph and the approved Sediment Delineation Plan.

A. In any portions of Reach 2 where the bottom of sediment is identified from probing and/or coring in accordance with the approved Sediment Delineation Plan, AK Steel shall excavate and properly dispose of all sediment, as well as any underlying clay or other native material that exceeds the applicable cleanup standard (i.e., where (1) the spatially-weighted average concentration of PCBs in such clay or other native material exceeds 1.5 mg/kg total PCBs dry weight, or (2) any individual sample of such clay or other native consolidated material exceeds 3.0 mg/kg total PCBs dry weight), in accordance with the approved Final Sediment Remediation Design Document.

From each core collected in portions of Reach 2 where the bottom of sediment is identified through coring in accordance with the approved Sediment Delineation Plan, AK Steel shall collect samples of any clay or other native material underlying Reach 2 sediment deposits and analyze the samples for PCBs. In such portions of Reach 2, AK Steel shall delineate the lateral and vertical extent of any areas where the clay or other native material underlying the sediment exceeds the aforementioned cleanup standard, consistent with the approved Sediment Delineation Plan, and in accordance with the approved Final Sediment Remediation Design Document.

B. In any portions of Reach 2 where the bottom of sediment is not identified from coring in accordance with the approved Sediment Delineation Plan, AK Steel shall excavate and properly dispose of the top two feet of sediment, as well as any additional underlying material that exceeds the applicable cleanup standard (i.e., where (1) the average concentration of PCBs exceeds 1.5 mg/kg total PCBs dry weight, or (2) any individual sample exceeds 3.0 mg/kg total PCBs dry weight).

From each core that recovers more than two feet of sediment in portions of Reach 2 where the bottom of sediment is not identified through coring in accordance with the approved Sediment Delineation Plan, AK Steel shall collect sample(s) of sediment beneath the top two feet of sediment and analyze such sample(s) for PCBs. In such portions of Reach 2, AK Steel shall delineate the lateral and vertical extent of any areas where PCB concentrations exceed the aforementioned cleanup standard in sediments beneath the top two feet of sediment.

C. AK Steel shall create plan view maps as well as cross-sections that clearly delineate cut lines that will be used to excavate all sediment and underlying clay or other native material required to be removed from Reach 2. The total number of cores collected by AK Steel in Reach 2 shall be sufficient to verify statistically that the cut lines will achieve the applicable cleanup standards. Excavation work in Reach 2 shall proceed from upstream to downstream.

AK Steel shall submit to OEPA applications for a NPDES permit and a PTI for any dredge dewatering treatment and discharge system. This IM will require a 401 Water Quality Certification issued from the State of Ohio, even if USACE determines the activity can proceed under a nationwide permit. The application for the 401 Water Quality Certification shall occur at the same time as all other NPDES and PTI applications required by the OEPA Division of Surface Water, so that one antidegradation public hearing for all applications can be scheduled for the same date. Also, access agreements will be required from property owners and approval of the Final Design Documents will be required from state and local transport authorities, appropriate railroad companies and utilities, as necessary.

8. Restoration of the Outfall 002 channel, Reach 1 of Dicks Creek and Monroe Ditch after remediation. Upon completion of (or concurrent with) IM 6, AK Steel shall install rip-rap in the Outfall 002 channel (to restore it to pre-existing grade), and restore Reach 1 of Dicks Creek with clean sand, gravel and cobble, as appropriate, to minimize channel incision and restore biological productivity to the maximum extent practical. For Reach 1 of Dicks Creek, at least 1 foot of clean material will be placed in areas where 1 or more feet of sediments have been removed. Design of restoration of Reach 1 of Dicks Creek shall include measures to minimize down-cutting or under-cutting of the streams upstream and downstream from the areas undergoing remediation.

With regard to Monroe Ditch, from the railroad culvert to the existing concrete liner, upon completion of (or concurrent with) IM 6, AK Steel shall design and implement restoration of this stream in order to limit movement of contaminants from the adjacent areas, minimize channel incision, restore biological productivity to the maximum extent practical and limit further impairment of the stream. At a minimum, AK Steel shall consider the following issues when designing and implementing the restoration: (1) the need for an impervious synthetic liner in Monroe Ditch from the railroad culvert to the existing concrete liner, including, but not limited to, the usage of an underdrain system in the stream with treatment for the collected water, in-bed containment walls, and layers of liner and (2) restoration of the stream's biological habitat, including stream substrate restoration through placement of clean sand, gravel and cobble, prevention of channel incision, measures to minimize down-cutting or under-cutting of the stream upstream and downstream of the area undergoing remediation, establishment of a floodplain/floodway and other riparian restoration measures.

The origin of the clean material used for the Outfall 002 channel, Reach 1 of Dicks Creek and Monroe Ditch will be specified within the approved Final Sediment Remediation Design Document. This IM will require a 401 Water Quality Certification issued from the State of Ohio, even if USACE determines the activity can proceed under a nationwide permit. As stated above, the application for the 401 Water Quality Certification shall occur at the same time as all other NPDES and PTI applications required by the OEPA Division of Surface Water, so that one antidegradation public hearing for all applications can be scheduled for the same date. Also, access agreements will be required from property owners and approval of the Final Design Documents will be required from state and local transport authorities, appropriate railroad companies and utilities, as necessary.

9. Continued operation of existing groundwater interceptor trench to prevent PCB-containing seeps from entering Monroe Ditch. An O&M Plan will be developed and submitted for review and approval in accordance with Section IX of the Consent Decree to ensure proper operation and maintenance of the existing interceptor trench, consistent with current procedures. The O&M Plan shall provide that: samples of the influent and effluent to the treatment system will be collected and analyzed on a weekly basis, as currently performed; samples of Monroe Ditch and Dicks Creek water samples will be collected and analyzed on a monthly basis, as currently performed; and operation and maintenance reports will be submitted to OEPA on a quarterly basis. AK Steel shall operate the existing interceptor trench in accordance with the approved O&M Plan until no PCBs are detected in the influent to the interceptor trench treatment system for a period of at least 18 consecutive months.

10. Groundwater seep inspection and control. AK Steel shall inspect the banks of Dicks Creek adjacent to AK Steel property and the banks of Monroe Ditch for groundwater seeps every

2 weeks, weather conditions permitting, and document the results of those inspections in its records. If weather conditions do not permit a scheduled inspection, the missed inspection will be undertaken the following week, weather conditions permitting, and subsequent inspections every two weeks thereafter, weather conditions permitting. If any new seep is detected, the new seep shall be sampled. All such samples shall be analyzed for PCBs, and if the seep is located outside the area covered by the phyto-remediation barrier described in IM 12, for pH. In any case where PCBs are detected in a seep, AK Steel shall also collect a sample of sediment or soil potentially impacted by such seep and analyze such sample for PCBs. If any sample required pursuant to this Paragraph contains PCBs, or if any such sample outside of the area covered by the phyto-remediation barrier described in IM 12 exhibits a pH greater than 9.0, then within 30 days after receiving results of analysis of all samples required pursuant to this Paragraph relating to a particular seep, AK Steel shall submit for approval in accordance with Section IX of the Consent Decree an Interim Measures Workplan providing for control of discharges from the seep, or a report evaluating whether the seep satisfies the criteria for implementation of Stabilization activities under Paragraph 22 of the Consent Decree.

AK Steel shall implement the groundwater seep inspections until no high pH (i.e. pH > 9) or PCBs are detected in any new seeps for a period of 18 months.

AK Steel shall address the requirements for the seep inspection and sampling pursuant to this IM in the O&M Plan required under IM 9.

11. Signs and fencing. Until completion of IM 2 through 8, above, AK Steel shall inspect and repair existing signs and fencing, as delineated in Exhibit A, on a monthly basis and document the results of these efforts in its records. AK Steel can remove the signs at the completion of IM 2-8. AK Steel shall ensure that gates on AK Steel property remain locked to restrict access to Dicks Creek. AK Steel shall address the requirements for this IM in the O&M Plan required under IM 9.

12. Control of groundwater seeps to Dicks Creek along the south bank. AK Steel will control groundwater seeps emanating from the south bank of Dicks Creek by evaluating and installing a phyto-remediation barrier over a 3,000 foot long area. The Interim Measures Workplan required pursuant to this SOW shall include (but not be limited to) the following information regarding the phyto-remediation barrier: number and species of plants to be used and how they will be planted; flow rates of ground water through the phyto-barrier; expected ranges of pH in the ground water; climate data for the site; some explanation of control effectiveness during plant dormancy period; time frame for implementation; and proposed O&M plan. AK Steel shall submit to OEPA an application for a PTI for the phyto-remediation barrier. Work under this IM may require pre-construction notification of the USACE and, as appropriate, a permit under Section 404 of the CWA, and certification from OEPA pursuant to Section 401 of the CWA.

### III. Interim Measures Components

Components of the Interim Measures, which are discussed in more detail below, include the following:

#### Part 1: Interim Measures Workplans

- A. Interim Measures Objectives and Scope
- B. Waste Characterization and Management

- C. Public Involvement
- D. Quality Assurance
- E. Data Management and Reporting

Part 2: Health and Safety Plan

Part 3: Interim Measures Design Program

- A. Design Plans and Specifications
- B. Operations and Maintenance Plan
- C. Project Schedule
- D. IM Construction Quality Assurance Objectives

Part 4: Reports and Submittals

- A. Progress Reports
- B. Interim Measures Workplans
- C. Final Design Documents
- D. Interim Measures Report

Part 5: Schedule

Part 1: Interim Measures Workplans

Except as provided below in this paragraph, AK Steel shall prepare and submit for review and approval in accordance with Section IX of the Consent Decree Interim Measures Workplans to implement each of the Interim Measures described in Section II of this SOW, as well as an amended or supplemental Workplan(s) for any subsequent Stabilization required by EPA under paragraph 22 of the Consent Decree or additional Interim Measure proposed by AK Steel. AK Steel may elect to include more than one Interim Measure in a single workplan. In lieu of submitting Interim Measures Workplans for IMs 9, 11, and the groundwater seep inspection and sampling activities required under IM 10, AK Steel shall prepare and submit for review and approval in accordance with Section IX of the Consent Decree and in accordance with the schedule set forth in Part 5 of this SOW, an O&M Plan providing for implementation of such requirements. The Workplan(s) shall include the Floodplain Soil Sampling and Analysis Plan, the Sediment Delineation Plan, and the Upland Sources Sampling and Analysis Plan. The Workplan(s) for IMs 2, 3, 4, 5, 6, 7, 8 and 12 shall include each of the components described in Part 1.A - 1.E below.



#### A. Interim Measures Objectives and Scope

The IM Workplan(s) shall specify in detail the objectives and scope of each IM, demonstrate how the IM will abate releases and threatened releases, and to the extent possible, be consistent and integrated with any long-term solution at the facility. The IM Workplan(s) will, as applicable, include a detailed discussion of the technical approach for each IM, including any sampling and analysis to be performed, a basis for the engineering design, engineering plans, schedules with implementation milestones for completion of each IM, and a description of key personnel responsible for directing the Interim Measures. Within 60 days after approval of each IM Workplan, a statement describing qualifications of key personnel performing the Interim Measures, including, as appropriate, contractor personnel, will be submitted for approval in accordance with Section IX of the Consent Decree. The IM Workplan(s) shall also document the overall management approach to the Interim Measures; include a Quality Assurance Project Plan (QAPP) and specify how data management and reporting will be accomplished for the IM.

#### B. Waste Characterization and Management

The IM Workplan shall provide a detailed description of how AK Steel will characterize, manage and dispose of any contaminated soils, sediments, wastewater and other wastes generated as a result of implementation of the Interim Measures.

#### C. Public Involvement

As part of the IM Workplan(s), AK Steel shall provide for public involvement in activities relating to the Interim Measures. AK Steel must never appear to represent or speak for EPA, OEPA, or Intervenors before the public, other government officials, or the media.

Public Involvement activities may include the following:

1. Conducting an open house and informal meeting(s) (i.e., availability session(s)), as appropriate, in a public location where people can talk to Agency officials and AK Steel on a one-to-one basis;
2. Preparing fact sheets summarizing current or proposed Interim Measure activities (all fact sheets shall be submitted to EPA, OEPA, and Intervenors for review prior to public distribution);
3. Maintaining an easily accessible repository (such as a municipal building or public library) of information on the facility-specific Interim Measure program, including the Consent Decree, approved workplans, and/or other reports.

A plan and proposed schedule for community relations activities shall be included in the public involvement component of the IM workplan(s), except for the approved Floodplain Soil Sampling and Analysis Plan, and the approved Sediment Delineation Plan. This schedule may be revised as appropriate, with EPA approval following reasonable notice to and opportunity to comment by OEPA and Intervenors.

#### D. Quality Assurance Project Plan(s) (QAPP)

As part of the IM Workplans, AK Steel shall prepare one or more QAPPs to document all monitoring procedures, sampling, field measurements and sample analysis performed during the IM so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. The QAPP(s) shall be prepared in accordance with guidance specified in Attachment 4 to the Consent Decree. A pre-QAPP meeting may be held prior to preparation of the QAPP. If held, AK Steel shall notify and afford an opportunity to participate to its QAPP preparer, laboratory representatives, EPA Project Coordinator, EPA Quality Assurance representatives, OEPA staff, and representatives of Intervenor.

A laboratory performance audit may be conducted by EPA or OEPA on the laboratory selected by AK Steel.

#### E. Data Management and Reporting

As part of the IM Workplan(s), AK Steel shall develop and implement data management and reporting procedures to document and track interim measures data and results. This component of the IM Workplan(s) shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The format to be used to present the raw data and conclusions of the Interim Measures shall be provided. As a final output, all locational, soil, sediment, water and groundwater data shall be submitted in an electronic database suitable for display in a GIS format.

#### Part 2: Health and Safety Plan

Concurrently with submission of the IM Workplan(s), AK Steel shall submit the Health and Safety Plan to EPA, OEPA and Intervenor for review. The Health and Safety Plan is not subject to approval pursuant to the Consent Decree; however EPA may submit comments on the Health and Safety Plan.

#### A. Major elements of the Health and Safety component may include:

- Facility description, including availability of resources such as roads, water supplies, electricity and telephone services;
- Description of the known hazards and evaluation of the risks associated with the known hazards and with each activity conducted;
- A list of key personnel and alternates responsible for site safety, response operations, and protection of human health;
- Description of the levels of protection to be worn by personnel;
- Delineation of the work area;
- Procedures to control site access;
- Description of decontamination procedures for personnel and equipment;

- Site emergency procedures;
- Emergency medical care for injuries and toxicological problems;
- Description of requirements for an environmental surveillance program;
- Routine and special training required for response personnel; and
- Procedures for protecting workers from weather-related problems;

B. The IM Health and Safety component shall be consistent with:

- NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
- EPA Order 1440.1 - Respiratory Protection;
- EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
- Facility Contingency Plan;
- EPA Standard Operating Safety Guide (1984);
- OSHA regulations particularly in 29 CFR 1910 and 1926;
- State and local regulations; and
- Other EPA guidance as appropriate.

Unless the Parties agree that other measures of personal protection are appropriate for particular activities or areas, representatives from EPA and OEPA agree to wear safety glasses with permanently affixed side shields, hard hats, long sleeve shirts, long pants, and leather steel toed shoes with metatarsal protection when visiting the Facility in connection with implementation of any Interim Measures, except that rubber boots may be worn in lieu of leather steel toed shoes with metatarsal protection for investigatory activities in Floodplain areas, Dicks Creek and Monroe Ditch. The Defendant shall supply leather steel-toed shoes with metatarsal protection upon request by EPA and OEPA. Intervenors shall comply with safety practices of AK Steel when on the Facility, as specified in Attachment 8 to the Consent Decree.

### Part 3: Interim Measures Design Program

A. Design Plans and Specifications

AK Steel shall develop and submit for approval in accordance with Section IX of the Consent Decree clear and comprehensive design plans and specifications for IMs 2, 3, 4, 5, 6, 7, 8 and 12. Such design plans and specifications shall include the following, as applicable:

1. Discussion of the design strategy and the design basis;
2. Discussion of the technical factors of importance;
3. Description of assumptions made and detailed justification of these assumptions;
4. Discussion of the possible sources of operation and maintenance problems;
5. Detailed drawings of the proposed design;
6. Tables listing materials, equipment and specifications; and
7. Appendices including:
  - Sample calculations (one example presented and explained clearly for significant or unique design calculations);
  - Derivation of equations essential to understanding the report; and
  - Results of laboratory or field tests.

B. Operation and Maintenance Plan

AK Steel shall prepare and submit for approval in accordance with Section IX of the Consent Decree, an O&M Plan to cover both implementation and long-term maintenance of the Interim Measures. This O&M Plan shall address the requirements for IMs 3, 8, 9, 10, 11, and 12. The O&M Plan for IMs 9, 10, and 11 shall be submitted in lieu of an IM Workplan for these Interim Measures; the O&M Plan for IMs 3, 8, and 12 may be submitted either as part of the IM Workplan or as part of the Final Design Documents. Each O&M Plan shall be composed of the following elements as appropriate to the specific Interim Measure:

1. Equipment start-up and operator training

AK Steel shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up and operation of the treatment systems and training covering appropriate operational procedures once the start-up has been successfully accomplished.

2. Description of normal operation and maintenance (O&M), including:
  - Description of tasks for operation;
  - Description of tasks for maintenance;
  - Description of prescribed treatment or operation conditions;

- Schedule showing frequency of each O&M task; and
  - Common and/or anticipated remedies.
3. Description of routine monitoring and laboratory testing, including:
- Description of monitoring tasks;
  - Description of required laboratory tests and their interpretation;
  - Required QA/QC; and
  - Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.
4. Description of equipment, including:
- Equipment identification;
  - Installation of monitoring components;
  - Maintenance of site equipment; and
  - Replacement schedule for equipment and installed components.
5. Records and reporting mechanisms required, including:
- Daily operating logs;
  - Laboratory records;
  - Mechanism for reporting emergencies;
  - Personnel and maintenance records; and
  - Monthly, quarterly, or annual reports, as specified, to Federal/State agencies.

The O&M Plan shall be submitted with the Final Design Documents or as approved in the Interim Measures Workplan(s).

C. Project Schedule

AK Steel shall develop and submit for approval in accordance with Section IX of the Consent Decree a proposed Project Schedule for construction and/or implementation of each Interim Measure which identifies timing for initiation and completion of all major milestones. At least 7 days prior to initiation of field activities associated with each major milestone task, AK Steel shall notify EPA, OEPA, and Intervenor of the scheduled dates for initiation and completion of such task. AK Steel shall specifically identify dates for completion of the project and major interim milestones which, upon approval, are enforceable terms of the Consent Decree. A

proposed Project Schedule shall be included within the Interim Measures Workplan and an updated schedule shall be incorporated into the Final Design Documents, as appropriate.

#### D. Construction Quality Assurance (CQA) Objectives

As part of the Final Design Documents submitted for approval in accordance with Section IX of the Consent Decree, AK Steel shall identify and document the objectives and framework for the development of a construction quality assurance program including the following: inspection activities, sampling requirements and documentation. The responsibility and authority of all organizations (i.e., technical consultants, construction firms, etc.) and key personnel involved in the construction of the Interim Measure shall be described. AK Steel must identify a CQA officer and the necessary supporting inspection staff.

##### 1. Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the Interim Measure(s) shall be summarized. The scope and frequency of each type of inspection or test shall be specified. Inspections shall verify compliance with all environmental requirements and include air quality and emissions monitoring records, as appropriate, waste disposal records (e.g., RCRA transportation manifests), etc. The inspection shall also ensure compliance with all health and safety procedures. In addition to oversight inspections, AK Steel shall conduct the following activities:

##### a. Preconstruction inspection and meeting

AK Steel may conduct a preconstruction inspection and meeting to:

- Review methods for documenting and reporting inspection data;
- Review methods for distributing and storing documents and reports;
- Review work area security and protocol;
- Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and
- Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

If held, the preconstruction inspection and meeting shall be documented by a designated person and minutes shall be transmitted to all parties.

##### b. Final inspection

Upon project completion, AK Steel shall notify the Project Coordinators for EPA and OEPA and the Project Representative for Intervenors for the purposes of

arranging a final inspection. The final inspection will consist of a walk-through inspection of the entire project site. The inspection is to determine whether the project is complete and consistent with the contract documents and the EPA-approved Interim Measures. Any outstanding construction items discovered during the inspection will be identified and noted. Additionally, treatment equipment will be operationally tested by AK Steel. AK Steel will certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. AK Steel will develop a final inspection report within 30 days of the inspection to outline the outstanding construction items, actions required to resolve items, completion date for these items, and date for any necessary follow-up inspection.

Upon completion of any outstanding construction items, AK Steel shall notify the Project Coordinators for EPA and OEPA and the Project Representative for Intervenors, and EPA will determine if a follow-up inspection is necessary. The final inspection report will be used as a checklist for the follow-up focusing on the outstanding items that were unresolved at the time of the last inspection.

In lieu of a single inspection upon completion of all IMs, a select number of final inspections may be conducted following completion of various major components of the IM SOW.

## 2. Sampling and Testing Requirements

The sampling and testing activities, sample size, sample and test locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems shall be presented in the CQA program.

## 3. Documentation

Recordkeeping requirements for CQA activities shall be described in detail. This shall include such items as daily summary reports, inspection data sheets, problem identification reports, design acceptance reports, and final documentation, including as-built plans and specifications. Provisions for the final storage of all records shall be presented.

## Part 4: Reports and Submittals

### A. Progress

AK Steel shall develop and submit to EPA, OEPA and Intervenors signed, monthly progress reports containing:

1. A description and estimate of the percentage of the Interim Measures completed;
2. Summaries of all findings;
3. Summaries of all changes made in the Interim Measures during the reporting period;

4. Summaries of all formal contacts with representatives of the local community and public interest groups, or State government other than OEPA during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Summary of the status of any permit applications required for the IM;
8. Changes in management personnel during the reporting period; and
9. Projected work for the next reporting period.

B. Interim Measures Workplan

AK Steel shall submit for approval in accordance with Section IX of the Consent Decree the Interim Measures Workplan(s) as described in Section III, Part 1.

C. Final Design Documents

AK Steel shall submit for approval in accordance with Section IX of the Consent Decree each of the final design documents described in Section III, Part 3.A through 3.D, above.

D. Interim Measures Report

At the "completion" of each Interim Measure (except for long-term operations, maintenance and monitoring), AK Steel shall submit an Interim Measure Implementation Report to EPA, OEPA and Intervenor. Each such Report shall document that the subject Interim Measure is consistent with the design specifications, and that the Interim Measure is performing adequately. Each Interim Measure Implementation Report shall include the following elements:

1. Synopsis of the Interim Measure and certification of design and construction;
2. Explanation of any modifications to the design plan(s) and/or Interim Measures Workplan(s) and why these were necessary for the project;
3. Listing of criteria, established before the Interim Measure was initiated, for judging the functioning of the Interim Measure and also explaining any modification to these criteria;
4. Results of facility monitoring, indicating that Interim Measures will meet or exceed the performance criteria; and
5. Explanation of the operation and maintenance (including monitoring) to be undertaken at the facility.

This report shall be based on the inspection summary reports, inspection data sheets, problem identification reports, any photographic records, any design engineers' acceptance reports,



deviations from design and material specifications (with justifying documentation) and as-built drawings, which shall be maintained by AK Steel as part of the project files. All such documents shall be made available for inspection by EPA or OEPA, upon request, and if requested AK Steel shall provide copies of any such documents. After completion of all Interim Measures, AK Steel shall submit to EPA, OEPA and Intervenors an Interim Measures Completion Report, including a compilation of the Interim Measures Implementation Reports for each of the Interim Measures. The Interim Measures Completion Report will be the Completion Report for the IM Work required under Section XVI of the Consent Decree.

**Part 5: Schedule**

AK Steel will provide IM submittals and complete implementation of Interim Measures according to the following schedule:

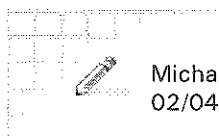
Requirement	Due Date
Submission of Interim Measures Workplan(s)	
- Floodplain Soil SAP (relating to IMs 1, 4b, 4c)	Already submitted and approved
- Sediment Delineation Plan (relating to IMs 6 and 7)	Already submitted and approved
- Upland Sources SAP (relating to IMs 3, 4a, 5)	Already submitted
- For all remaining elements of the Workplan(s) for IMs 2, 3, 4, 5, 6, 7, 8	Within thirty (30) days after entry of the Consent Decree, unless EPA approves a longer period, after consultation with OEPA and Intervenors
- Phytoremediation Workplan (IM 12)	Within sixty (60) days of entry of Consent Decree, unless EPA approves a longer period, after consultation with OEPA and Intervenors
- For control of seeps, if required pursuant to IM 10	Within thirty (30) days after receipt of analytical results indicating that seep contains PCBs or pH above 9.0, unless EPA approves a longer period, after consultation with OEPA and Intervenors
Submission of Public Involvement Plan Submission of Quality Assurance Plan Submission of Data Management Plan Submission of Health and Safety Plan	Within thirty (30) days after entry of the Consent Decree, unless EPA approves a longer period, after consultation with OEPA and Intervenors

Requirement	Due Date
Submission of Operations and Maintenance (O&M) Plans for IMs 9, 11, and seep inspection and sampling requirements of IM 10	Within thirty (30) days after entry of the Consent Decree, unless EPA approves a longer period, after consultation with OEPA and Intervenors
<p>Submission of Design Documents, including Design Plans and Specs, O&amp;M Plans, Project Schedules and Construction QA Plan for:</p> <ul style="list-style-type: none"> <li>- Floodplain Soil Remediation Design Document (relating to IMs 2, 4b, 4c)<sup>1/</sup></li> <li>- Upland Soil Remediation Design Document (relating to IMs 4a, 5)</li> <li>- MDA 33S Remediation Design Document (relating to IM 3)</li> <li>- Sediment Remediation Design Document (relating to IMs 6, 7, 8)</li> <li>- Control of seeps, if required pursuant to IM 10</li> <li>- Phytoremediation Design Document (relating to IM 12)</li> </ul>	In accordance with the project schedules in the approved IM Workplan(s), unless EPA approves a longer period, after consultation with OEPA and Intervenors
Implementation of each approved Final Design Document	In accordance with project schedule in the approved Final Design Document, unless EPA approves a longer period, after consultation with OEPA and Intervenors
Submission of Interim Measures Completion Report(s)	In accordance with the project schedule in the approved IM Workplans and Design Documents, as applicable, unless EPA approves a longer period, after consultation with OEPA and Intervenors

<sup>1/</sup> Based on results of sampling pursuant to the Floodplain Soil SAP, floodplain remediation activities may be included in the Sediment Design Document.

Requirement	Due Date
Submission of Progress Reports	Monthly, by the 15 <sup>th</sup> of each Month, beginning on the first month after entry of the Consent Decree





Michael Mikulka  
02/04/2000 01:38 PM

To: Robert Guenther cc: Lisa Geist

Subject: AK Steel

Robert, this summarizes our conversations this morning with Harold O'Connell (937-285-6078), Jeff Hines (937-285-6020) and Amy Gibbons-Bauer of OEPA's SWDO, also summarizes a conversation I had later with Mary Osika (937-285-6101) of OEPA's Division of Surface Water, SWDO.

Harold O'Connell called me yesterday and said that his manager, Jeff Hines had some questions on the scope of the corrective action which they wanted to discuss. At the outset of the call this morning, Jeff said that based on what the AG was telling him, he wasn't sure we were on the same wavelength on the scope of the corrective action. When he had expressed that concern, the AG wanted them to discuss it with us by the end of this week to find out what exactly we were planning to do.

I explained to them that we had received and reviewed their package with respect to the corrective action ranking for the site. Independent of that, we had evaluated the environmental information available to us, and had come to the conclusion that, irrespective of the ranking, there was sufficient environmental basis to proceed with the site-wide corrective action. When this was raised to U.S. EPA management, they agreed that a site-wide corrective action should be pursued concurrent with the claims for RCRA 7003. As such, the current plan is to develop a case for both a RCRA 7003 claim and a RCRA 3008(h) claim and pursue that with AK through the DOJ.

After review of the info we had, I had come to the tentative conclusion that there is a basis for corrective action on three independent avenues: First, the facility's status as a permittee for underground injection of pickle liquor waste. Second, the facility's operation of an illegal waste pile currently undergoing closure by OEPA of tar decanter sludge (K087) from early 1983 through February 23, 1990, where the facility did not have either interim status or a permit. Finally, the record reflects a history of RCRA violation, many of which would have independently caused AK to lose its ability to operate as an LQG, such as storage over 90 days, failure to properly label, cover or mark accumulation dates on waste, etc. As such, we had the basis for a judicial claim for corrective action.

Jeff was concerned that the corrective action would be limited in scope related only to the info OEPA had recently provided (COG leak, etc.). I assured him that corrective action would cover the entire site.

We then discussed the remedy. We discussed the immediate removal of the sediment in the landfill trib and Dick's creek; and then cessation or alteration of the kish pot process. OEPA staff said the Div. of Surface Water staff may want to do further sampling before the removal. Also, they were not familiar with the kish pot process, but thought that IMS was no longer doing it. A new contractor may be involved.

Finally, we discussed a potential site visit next week, and they said that we should coordinate through Mary Osika, but next week may not be good due to the quantity of snow.

I later called Mary Osika and she said either 2/10 or 2/16-18/2000 were good dates for her for a site visit. Mary is in Dayton, which is a 25-30 minute drive from Middletown. She said there was

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snow on the ground already, and it has been snowing there for the last 2 days, with 6-8 inches on the ground. We may not be able to see that much if we want to walk the stream.

I asked her what she knew about the slag process that AK was doing, and whether or not it was ongoing. She said that they brought over hot pots of slag (kish pots) on trucks, and dumped the slag on the ground, and sprayed it with water. The water comes from a diversion of water from Outfall 002, which is brought across Dick's Creek via a pump house. She said that they had created some surface trenching in the vicinity after the seeps were found to capture water that runs off or percolates in, and then they respray it onto the kish pots where it evaporates. This was done by IMS in response to the initial seep discovery, in order to reduce the water usage. She believes the kish process is continuing, but is not aware of any other efforts to capture ground water to prevent its migration to the landfill tributary.

We discussed the remedy, and Mary thought that it could be OK to proceed with a removal and then do the confirmatory testing; she was going to discuss it further in-house to see if they felt they needed additional testing prior to a removal action by AK.

I also asked her if she had any problem with removal of the materials in Outfall channels 002 and 003 where other PCBs were found. She did not. We discussed the sources of PCBs at those outfalls, and Mary said that OEPA had asked AK to investigate that with no results so far. These sources need to be investigated as part of the 7703 relief, or as part of the long term corrective action.

Once Lisa gets in Monday, we can decide whether it is best to go out next week or the week after. My main objective is to get a sense of the amount of material that may be there for a clean-up, and to walk the area to see if there are other possible problems that we may not be aware of to date (other seeps). A subobjective is to visit the facility to see the kish pot area and the PCB treatment plant. This may be too much to accomplish in one day.

Let me know if you have any questions or concerns.

AK5 041428

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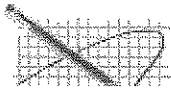
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Let me know if you have any questions or concerns.

AK5 044076







Michael Mikulka

02/04/00 01:38 PM

To: Robert Guenther/R5/USEPA/US@EPA  
cc: Lisa Geist/R5/USEPA/US@EPA  
Subject: AK Steel

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After review of the info we had, I had come to the tentative conclusion that there is a basis for corrective action on three independent avenues: First, the facility's status as a permittee for underground injection of pickle liquor waste. Second, the facility's operation of an illegal waste pile currently undergoing closure by OEPA of tar decanter sludge (K087) from early 1983 through February 23, 1990, where the facility did not have either interim status or a permit. Finally, the record reflects a history of RCRA violation, many of which would have independently caused AK to lose its ability to operate as an LQG, such as storage over 90 days, failure to properly label, cover or mark accumulation dates on waste, etc. As such, we had the basis for a judicial claim for corrective action.

Jeff was concerned that the corrective action would be limited in scope related only to the info OEPA had recently provided (COG leak, etc.). I assured him that corrective action would cover the entire site.

We then discussed the remedy. We discussed the immediate removal of the sediment in the landfill trib and Dick's creek; and then cessation or alteration of the kish pot process. OEPA staff said the Div. of Surface Water staff may want to do further sampling before the removal. Also, they were not familiar with the kish pot process, but thought that IMS was no longer doing it. A new contractor may be involved.

Finally, we discussed a potential site visit next week, and they said that we should coordinate through Mary Osika, but next week may not be good due to the quantity of snow.

I later called Mary Osika and she said either 2/10 or 2/16-18/2000 were good dates for her for a site visit. Mary is in Dayton, which is a 25-30 minute drive from Middletown. She said there was snow on the ground already, and it has been snowing there for the last 2 days, with 6-8 inches on the ground. We may not be able to see that much if we want to walk the stream.

I asked her what she knew about the slag process that AK was doing, and whether or not it was ongoing. She said that they brought over hot pots of slag (kish pots) on trucks, and dumped the

**AK5 044075**



DRAFT

CONFIDENTIAL

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION

THE UNITED STATES OF AMERICA,  
AND STATE OF OHIO - INTERVENOR

Plaintiffs,

vs.

AK STEEL CORPORATION,

Defendant.

: CASE NO. C-1-00530  
:  
: JUDGE WEBER  
:  
:  
:  
:  
:  
:  
:

RELEASED  
DATE 8/7/2018  
RIN # 2018-004691  
INITIALS JG

CONSENT ORDER FOR PRELIMINARY INJUNCTION

Plaintiff, State of Ohio, by its Attorney General, Betty D. Montgomery (hereinafter "Plaintiff"), having filed the Complaint and Motion for Intervention herein against Defendant AK Steel Corporation (hereinafter "Defendant " or "AK Steel") alleging violations which include Chapters 3767 and 6111 of the Ohio Revised Code ("R.C.") and the Clean Water Act ("CWA"), 33 U.S.C. § 1311 *et seq.*, and the parties having consented to the entry of this Order;

**WHEREAS**, by entering into this Consent Order for Preliminary Injunction ("COPI"), the parties hereby represent that their mutual objectives are to eliminate the unpermitted release(s) of PCBs, PAHs, and other industrial wastes into or from the area depicted in the map in Appendix A, and to fully characterize PCB, PAH, and other industrial waste contamination and evaluate the risk associated with such contamination in the soils, groundwater, surface water and sediments in the area depicted in Appendix A.

**WHEREAS**, this COPI provides for remedies and other injunctive relief to begin to address the State's alleged violations at the Site (as defined in Section I, paragraph 2), except for remedial actions to address pollution in waters of the state and the associated sediments, and all



rights reserved in Section IV of this COPI;

**NOW THEREFORE**, without the trial of any issue of fact of law, and upon the consent of the parties hereto, it is hereby **ORDERED** as follows:

### **I. DEFINITION**

1. As used in this COPI, "**Response costs**" shall refer to all costs including, but not limited to, payroll costs, contractor costs, travel costs, direct costs, indirect costs, legal and enforcement-related costs, oversight, laboratory costs, the costs of reviewing or developing plans, reports, and other items pursuant to this COPI, verifying the activities undertaken pursuant to this COPI or otherwise implementing or enforcing this COPI.

2. As used in this COPI, "**Site**" shall refer to property owned and/or operated by Defendant in Middletown, Butler County, Ohio, where the storage and/or disposal of pollution, industrial waste and/or other waste, as defined in R.C. 6111.01, has occurred and/or where the discharge or placement of pollution, industrial waste and/or other waste to waters of the State has occurred, including any area inside or outside of the property where pollution, industrial waste and/or other waste has migrated. The Site has the mailing address of 1801 Crawford Street, Middletown, Butler County, Ohio and includes, but is not limited to, the following areas: steel manufacturing facility, including north, south, and melt plant areas, active residual waste landfills, old landfills, Monroe Ditch area, and International Milling Services slag handling facility. The Site is depicted generally on the attached map in Appendix A.

### **II. JURISDICTION**

3. This Court has jurisdiction over the subject matter herein pursuant to R.C. Chapters 3767 and 6111 and the CWA, 33 U.S.C. §1311 *et seq.* The Court has jurisdiction over the parties hereto. Venue is proper in this Court.

### **III. PARTIES BOUND**



4. The provisions of this COPI shall apply to and be binding upon the parties to this action and Defendant's agents, employees, assigns, successors in interest and any person acting in concert, privity or participation with Defendant. Defendant shall provide a copy of this COPI to any lessee or successor in interest and each key employee, consultant or contractor employed to perform work referenced herein.

5. In the event Defendant proposes to sell or transfer real property or operations otherwise subject to this COPI, it shall advise the proposed purchaser or transferee of the existence of this COPI and shall notify the Ohio EPA with written notice of such proposed sale or transfer not later than thirty (30) days prior to transfer of ownership, operation, or other interest. Defendant shall condition the transfer of ownership, operation, or other interest related to the performance of activities under this COPI upon compliance with the terms and conditions of this COPI.

#### **IV. RESERVATION OF RIGHTS**

6. The State of Ohio reserves the right to seek further relief from this or any other Court, including, but not limited to, further preliminary and/or permanent injunctive relief, civil penalties and cost recovery for work beyond this COPI. This reservation explicitly includes the State's right to pursue an order implementing a remedy for contamination at the Site and to seek recovery of costs for such work. This reservation also explicitly includes the State's right to seek relief for claims for damages to natural resources. This COPI in no way waives any defenses which Defendants may have as to such further relief.

7. The State of Ohio expressly reserves, and this COPI shall be without prejudice to, any civil or criminal claims, demands, rights, or causes of action, judicial or administrative, the State may have or which may in the future accrue against Defendant or others, regardless of whether such claim, demand, right or cause of action was asserted in the Complaint. This COPI





in no way waives any defenses which Defendant may have as to such claims, demands, rights or causes of action.

8. Nothing herein shall limit the authority of the State of Ohio to undertake any action against any entity, including Defendant, to eliminate or control conditions which may present a threat to the public health, safety, welfare or environment, and to seek cost reimbursement for any such action. This COPI in no way waives any defenses which Defendant may have as to such claims, demands, rights or causes of action.

9. Nothing herein shall be construed to relieve Defendant of their obligation to comply with applicable federal, state or local statutes, regulations or ordinances, including but not limited to permit requirements.

#### **V. INTERIM MEASURES AND OTHER INJUNCTIVE RELIEF FOR WATER POLLUTION CONTROL**

##### **A. Site-wide: Elimination of Discharges of PCBs, PAHs or Industrial Wastes**

10. As of the effective date of this COPI, AK Steel shall take such actions as are necessary to prevent human exposure to contaminated sediments and surface water in the landfill tributary and in Dick's Creek from outfall 003 to the confluence of Dick's Creek with the Great Miami River. Such actions may include, but are not necessarily limited to: providing for 24-hour a day patrol of the landfill tributary and Dick's Creek; public education and outreach activities; maintenance of the existing warning signs along Dick's Creek and the placement of additional signs as necessary; and any other measures necessary to ensure that exposure is prevented. AK Steel shall continue to implement exposure prevention actions until such time as the risk associated with the sediments in the landfill tributary and Dick's Creek have been defined and associated contamination remediated.



11. As of the effective date of this COPI, AK Steel shall prevent any treated, partially treated, and/or untreated effluent water from the current interceptor trench and waste water treatment system from entering waters of the State.

12. As of the effective date of this COPI, AK Steel shall eliminate the seepage of groundwater contaminated with PCBs, PAHs and/or other industrial wastes to waters of the State.

- a) Defendant shall operate and maintain the current interception trench and waste water treatment system, and monitor its effectiveness, including, but not limited to, filter condition and characteristics of treated effluent water, at least weekly. Defendant shall record these inspection in a log.
- b) Defendant shall continue the weekly sampling protocol for monitoring the current interceptor trench and waste water treatment system performance.
- c) Defendant shall notify the Ohio EPA spill line at (800) 282-9378 within one (1) hour of the discovery of the failure of the current interceptor trench and waste water treatment system, or its operation, to collect or treat the seepage or effectively remove PCBs, PAHs, and industrial wastes [to below Ohio EPA approve method detection limits] from the collected seepage. Additionally, Defendant shall notify the Ohio EPA Project Coordinator, as identified in Section IX, Document Submittal, within the next business day of the discovery of such failure. Defendant shall within five (5) business days of the failure of the current interceptor trench and waste water treatment system, or its operation, submit the Ohio EPA Project Coordinator, identified in Section IX, Document Submittals, a report of the date and nature of the system failure, and of the repairs or other remedial actions performed.

13. As of the effective date of this COPI, AK Steel shall eliminate seepage of PCBs, PAHs and/or other industrial wastes to waters of the State in areas where it may reasonably occur



in the future. If evidence of additional seepage is noted, AK Steel shall conduct sampling to determine if PCBs, PAHs and/or other industrial wastes are being released to waters of the State.

14. As of the effective date of this COPI, AK Steel shall must monitor surface water quality, at least monthly, for possible impacts from seepage at a minimum of four locations including adjacent to the known seep area, immediately downstream of the known seep area, at the confluence of the landfill tributary with Dick's Creek, and downstream in Dick's Creek at Yankee Road.

15. In addition to other applicable notification and reporting requirements which apply to Defendant under State, federal or local authority, Defendant shall make a report to the Ohio EPA spill line at (800) 282-9378 within one (1) hour of discovery of any actual or suspected discharge of PCBs, PAHs and industrial wastes seepage to waters of the State. Additionally, Defendant shall notify the Ohio EPA Project Coordinator (as identified in Section IX, Document Submittals), during normal business hours, of the discovery of any actual or suspected discharge of PCBs, PAHs and industrial wastes seepage to waters of the State. Suspected discharge includes observation of any white precipitate seeping to or within waters of the State.

16. Within thirty (30) days of the effective date of this COPI, AK Steel shall develop and submit for review and approval, pursuant to Section X, Review of Submittals, to the Ohio EPA Project Coordinator, as identified in Section IX, Document Submittals, an inspection plan and checklist to inspect weekly, at a minimum, the west and east banks of the landfill tributary, the banks of Dick's Creek adjacent to the closed landfills, and the drainage swales adjacent to closed landfill #1 for evidence of seepage, or impacts from seepage, to surface waters and sediments.

17. Within thirty (30) days of the effective date of this COPI, AK Steel shall implement the inspection plan in paragraph 15 above, and must continue to inspect at least



weekly until AK Steel eliminates and remediates the source(s) of PCBs, PAHs and other industrial waste seepage. AK Steel must record these inspections in a log and immediately inform Ohio EPA Project Coordinator if any seepage is detected.

#### **B.Site Characterization Plan**

18. Within sixty (60) days of the effective date of this COPI, AK Steel shall submit to the Ohio EPA Project Coordinator, as identified in Section IX, Document Submittals, for review and approval, pursuant to Section X, Review of Submittals, a Site Characterization Plan ("SCP") and implementation schedule(s) for an investigation of sediment and surface water quality in Dick's Creek, groundwater/surface water interaction in Dick's Creek, groundwater flow and quality, and sources of PCBs, PAHs, and other industrial wastes in the area delineated on the map in Appendix A. The SCP shall at a minimum provide for the performance of investigative and such other tasks as are necessary to accomplish the objectives of and work described in these Orders.

19. AK Steel shall include as an appendix to the SCP a list of any and all environmental studies which may have already been performed in the area delineated in Appendix A and Dick's Creek, and shall identify by title, date, and entity performing the study, any and all reports, work plans, or other documents generated or submitted to AK Steel as a result conducting or having conducted such studies. Additionally, AK Steel shall also include in such appendix a summary of the findings of each study and document, including but not limited to identification of the findings and conclusions of such studies, and any actions taken as a result of such studies. AK Steel shall make the listed documents available to Ohio EPA upon request.

20. The SCP shall provide for delineation of the nature and extent of contamination including, but not limited to the presence of PCBs, PAHs, other semi-volatile compounds and metals in surface waters, groundwater, and soils in the area delineated in Appendix A and in the sediments and surface waters of Dick's Creek and the landfill tributary (i.e. from the confluence





of Dick's Creek with the Great Miami River to upstream of AK Steel outfall 003, the drainage swales on the west side of closed landfill #1, discharge channels associated with outfalls 002 and 003, and any polishing or settling ponds associated with these outfalls).

21. The SCP shall provide for collection and analysis of sediment core samples at the discrete intervals of 0-6 inches, 6-12 inches, 12-18 inches, and 18-24 inches in depth. Additional depths may be necessary depending on initial results. AK Steel shall also sample sediments in areas considered free of PCBs, PAHs and/or other industrial wastes to identify the nature and extent of sediment contamination in the surficial and deep sediments of the surrounding area, including, but not limited to, upstream of outfall 003, in Dick's Creek, and upstream and downstream of the confluence of Dick's Creek with the Great Miami River.

22. The SCP shall include provisions for conducting a hydrogeologic study to further characterize groundwater flows, groundwater quality, and groundwater/surface water interaction in the area delineated in Appendix A and Dick's Creek. The hydrogeologic study shall provide for investigative tasks sufficient to support the ongoing evaluation of the effectiveness of any actions taken or proposed to accomplish the mutual objectives of this COPI, including, but not limited to: 1) minimize the influence of the kish pot operation on groundwater flow; 2) eliminate the seepage of groundwater contaminated with PCBs, PAHs, and industrial waste to surface waters of the state; 3) monitor the effectiveness of the current interception trench system to completely capture contaminated groundwater flow toward the landfill tributary or Dick's Creek; and 4) delineate any high pH in groundwater in the vicinity of the slag processing area.

- a) The hydrogeologic study shall also include investigative tasks sufficient to fully characterize groundwater flow in the area delineated in Appendix A and Dick's Creek so as to identify potential paths for contaminant migration, including but not limited to the northern groundwater flow path towards Dick's Creek so as to determine if the slag processing area has contributed to the PCB, PAH, or other



industrial waste contamination in Dick's Creek upstream of the confluence with the landfill tributary. At a minimum, the hydrogeologic study shall provide for the installation of at least three additional groundwater monitoring well clusters installed in both the perched and shallow aquifers. These well nests shall be located: (1) to the west of the existing pump house, between the pump house and monitoring well MDA02S; (2) 500 feet east of the cluster described in number 1; and (3) 500 feet east of the cluster described in number 2 (east of the pump house).

- b) The hydrogeologic study shall also include investigative tasks sufficient to characterize groundwater/surface water interaction (recharge/discharge) in Dick's Creek and the landfill tributary to determine if recharge of contaminated groundwater to Dick's Creek or the landfill tributary is contributing to surface water and sediment contamination.

23. The SCP shall include provisions for the investigation and identification of all remnant sources of PCBs, PAHs, and other industrial wastes in soils in the area delineated in Appendix A which may be contributing to releases of PCBs, PAHs, or other industrial wastes to Dick's Creek, the landfill tributary, or pose an unacceptable risk to human health or the environment. At a minimum, AK Steel will consider the results of the investigation conducted by Arcadis Geraghty and Miller (e.g. soil in vicinity of SS-01, BH-15b, BH-07, BH-08, etc.) as well as any follow up investigation and characterization of potential source areas outside of the slag processing area as delineated in Appendix A.

24. The SCP shall include proposed methodologies and all associated inputs for risk calculations sufficient to determine the chemical concentrations of PCBs, PAHs, and/or other industrial wastes in sediment, soils, surface water, and groundwater which pose an unacceptable risk to human health and/or ecological receptors. The proposed methodologies, inputs, and



calculations must include, at a minimum, consideration of: assessment of the high frequency exposure of children playing in the creek; the adult trespasser to the creek; food chain exposure to human health and ecological receptors; and any other exposures to human health and ecological receptors which may originate from the presence of PCBs, PAHs, and/or other industrial wastes in sediment, soils, surface water, and groundwater. Any risk assessment activities proposed by AK Steel must use appropriate U.S. EPA and Ohio EPA guidance as listed in Appendix B of this COPI.

25. The SCP shall describe the proposed sampling locations, the sampling and analytical methods, the constituents subject to sampling and analysis, and shall include a quality assurance/quality control (QA/QC) plan that follows the most recent U.S. EPA and Ohio EPA approved QA/QC guidance as listed in Appendix B of this COPI.

26. AK Steel shall prepare the SCP according to applicable U.S. EPA and Ohio EPA guidance documents as listed in Appendix B of this COPI. AK Steel shall obtain the approval of Ohio EPA prior to implementing the SCP.

27. Upon approval by Ohio EPA of the SCP, pursuant to Section X, Review of Submittals, AK Steel shall implement the SCP in accordance with the approved schedule(s) contained therein.

28. AK Steel shall notify the Ohio EPA Project Coordinator, identified in Section IX, Document Submittals, no less than fourteen (14) days in advance of any planned sample collection activities conducted under this Order to provide time to prepare for the collection and analysis of split samples. AK Steel shall provide split samples upon request.

29. Within one hundred and twenty (120) days of Ohio EPA's approval of the SCP, AK Steel shall implement and complete the SCP, and shall submit a report (Site Characterization Report) for review and approval pursuant to Section X, Review of Submittals, to the Ohio EPA Project Coordinator, identified in Section IX, Document Submittals, containing the analytical



data, risk calculations, and such other supporting documentation as may be necessary to fully and completely describe the results of the implementation of the SCP. The Site Characterization Report shall at a minimum include a determination of the volumes and areas of contaminated media which exceed the calculated risk-based levels, including maps and cross-sections depicting the impacted areas.

30. In completing the activities required under this COPI, Defendant may rely on data, results, findings, or conclusions generated through any effort which is not required by this COPI only if Defendant can demonstrate to the satisfaction of Ohio EPA that such data, results, findings, or conclusions are technically valid and, had those efforts been conducted pursuant to this COPI, would have complied with the standards and requirements as described in this COPI and in accordance with the guidance listed in Appendix B.

### **C. Kish Pot Operations**

31. Within thirty (30) days of the effective date of this COPI, AK Steel shall replace the pump in use at the kish pot area of the slag processing operations, which requires a constant flow to be primed, with a self-priming pump.

32. Within sixty (60) days of the effective date of this COPI, AK Steel shall submit a plan for review and approval to install a permanent water recycle system at the kish cooling building.

33. Within one hundred and eighty (180) days of the effective date of this COPI, AK Steel shall install and operate the permanent water recycle system.

34. Defendant shall assess whether the practice of reuse of the effluent from the current interceptor trench and waste water treatment system at the slag processing operations and/or for dust control at the Site causes (a) contamination by PCBs, PAHs and industrial wastes in soil or other media at the Site, and/or (b) poses a risk of runoff to any surface waters of the State. By September 1, 2000, Defendant shall submit to Ohio EPA, pursuant to Section IX,





Document Submittals, for review and approval pursuant to Section X, a report of the assessment conducted in accordance with this paragraph.

#### **D. Permits to Install**

35. Defendant shall, on or before July 30, 2000, submit to Ohio EPA in accordance with Section IX of this COPI, Document Submittals, for review and approval pursuant to Section X, an approvable PTI application with detail plans prepared in accordance with Ohio Adm. Code Chapter 3745-31 for the current interceptor trench and waste water treatment system at the Site. Defendant shall submit a timely and approvable PTI application, prepared in accordance with Ohio Adm. Code Chapter 3745-31, for any future modifications to the current interceptor trench and waste water treatment system which require a PTI.

#### **VI. ADDITIONAL WORK**

36. Ohio EPA or Defendant may determine that in addition to the tasks defined in the approved SCP, additional work may be necessary to accomplish the objectives of this COPI. Within ten (10) days of receipt of written notice from Ohio EPA that additional work is necessary, Defendant shall submit a work plan and schedule to Ohio EPA Project Coordinator, as identified in Section IX, Document Submittals, for review and approval pursuant to Section X, for the performance of the additional work. The work plan and schedule shall conform to the standards and requirements as described in this COPI and in accordance with the guidance documents listed in Appendix B. Upon approval of the work plan by Ohio EPA, pursuant to Section X, Review of Submittals, Defendant shall implement the work plan for additional work in accordance with the schedules contained therein.

37. In the event that Defendant determines that additional work is necessary,



Defendant shall submit a work plan for the performance of additional work. The work plan shall conform to the standards and requirements as described in this COPI and in accordance with the guidance documents listed in Appendix B. Upon approval of the work plan by the Ohio EPA pursuant to Section X, Review of Submittals, Defendant shall implement the work plan for additional work in accordance with the schedules contained therein.

## **VII. DESIGNATED SITE COORDINATORS**

38. Within five (5) days of the effective date of this COPI, Defendant shall notify Ohio EPA, in writing, of the name, address and telephone number of the designated Site Coordinator and Alternate Site Coordinator. If a designated Site Coordinator or Alternate Site Coordinator is subsequently changed, the identity of the successor will provided to Ohio EPA at least five (5) days before the change occurs, unless impracticable, but in no event later than the actual day the change is made.

39. To the maximum extent practicable, except as specifically provided in this COPI, communications between Defendant and Ohio EPA concerning the implementation of this COPI shall be made between the Defendant's Site Coordinator and the Ohio EPA Project Coordinator. Defendant's Site Coordinator shall be available for communication with Ohio EPA regarding the implementation of these COPI for the duration of these COPI. Defendant's Site Coordinator shall be responsible for assuring that all communications from Ohio EPA are appropriately disseminated and processed. Defendant's Site Coordinator or alternate shall be present on the Site or on call during all hours of work at the Site.

40. Without limitation of any authority conferred on Ohio EPA by statute or regulation, the Ohio EPA Project Coordinator's authority includes, but is not limited to, the following:

- a. Taking samples and directing the type, quantity and location of samples to be taken by



- Defendant pursuant to an approved work plan;
- b. Observing, taking photographs, or otherwise recording information related to the implementation of these COPI, including the use of any mechanical or photographic device;
  - c. Directing that activities stop whenever the Project Coordinator for Ohio EPA determines that the activities at the Site may create or exacerbate a threat to public health or safety, or threaten to cause or contribute to air or water pollution or soil contamination;
  - d. Conducting investigations and tests related to the implementation of this COPI;
  - e. Inspecting and copying records, operating logs, contracts and/or other documents related to the implementation of these COPI ; and
  - f. Assessing Defendant's compliance with this COPI.

### **VIII. SUPERVISING CONTRACTOR**

41. All activities performed pursuant to this COPI shall be under the direction and supervision of a contractor with expertise in hazardous waste site investigation and remediation. Prior to the initiation of the activities, Defendant shall notify Ohio EPA in writing of the name of the supervising contractor and any subcontractor to be used in complying with the terms of this COPI.

### **IX. DOCUMENT SUBMITTALS**

42. Any documents required to be submitted to Ohio EPA pursuant to provisions of this COPI shall be submitted to the following addresses, or other addresses as notified by Ohio EPA:

Ohio Environmental Protection Agency

Division of Surface Water

122 South Front Street

Columbus, Ohio 43215

Attn: Manager, Water Resources Management Section; and



Ohio Environmental Protection Agency  
Division of Surface Water, Southwest District Office  
401 East Fifth Street  
Dayton, Ohio 45402-2911  
Attn: Mary Osika (or her successor), Project Coordinator.

#### **X. REVIEW OF SUBMITTALS**

43. Ohio EPA agrees to review any plan, report, or other document that Defendant is required under this COPI to submit to Ohio EPA, in accordance with this COPI, appropriate state laws and rules and applicable guidelines. Upon review, Ohio EPA may in writing:

- a. Approve the submission in whole or in part;
- b. Approve the submission upon specified conditions;
- c. Direct Defendant to modify the submission, including, but not limited to, based on new information or changed conditions;
- d. Disapprove the submission in whole or in part, notifying Defendant of the deficiencies;
- e. Modify and approve the submission in whole or part; or
- f. Any combination of the above.

44. In the event of approval, approval upon condition, or approval with modification by Ohio EPA, Defendant shall proceed to take any action required by the submission as approved, conditionally approved and/or modified by Ohio EPA. Unless a shorter time period is specified in the approved plan or other document, Defendant shall implement the approved plan





or other document in accordance with specifications and schedule contained within the approved plan or other document.

45. In the event that Ohio EPA initially disapproves a submission, or directs Defendant to modify the submission, in whole or in part, and notifies Defendant of the same, Defendant shall within fourteen (14) days, or such longer period of time as specified by Ohio EPA in writing, correct the deficiencies or make the modifications, and resubmit to Ohio EPA for approval a revised submission. By agreement of Ohio EPA and Defendant representatives, Defendant may only resubmit such portions pertaining to the notice of deficiency or modification. The revised submission shall incorporate all of the changes, additions, and/or deletions specified by Ohio EPA in its notice of deficiency or modification. Any work done by Defendant prior to Ohio EPA's approval of a submission of a corresponding deliverable is subject to revision by Defendant based upon Ohio EPA's approval, conditional approval and/or modification with approval.

46. In the event that Ohio EPA disapproves a revised submission, in whole or in part, Ohio EPA may again require Defendant to correct the deficiencies and incorporate all changes, additions, and/or deletions within fourteen (14) days, or such period of time as specified by Ohio EPA in writing or take any other action under this Section.

47. All plans, reports, or other documents required to be submitted to Ohio EPA under this COPI shall, upon approval by Ohio EPA, be deemed to be incorporated in and made an enforceable part of this COPI. In the event that Ohio EPA approves a portion of a plan, report, or other document, the approved portion shall be deemed to be incorporated in and made an enforceable part of this COPI.

48. Defendant's and Ohio EPA's representatives may jointly agree to minor field changes to be made by Defendant to any plan, report, or other document approved by Ohio EPA. Defendant shall notify Ohio EPA's representative of the nature of and reasons for any desired



modification by Defendant. Within five (5) days of agreement by Ohio EPA's and Defendant's representatives, Defendant's representative shall submit written notification describing the agreed minor field changes to Ohio EPA's representative for review and approval.

49. If Ohio EPA determines that any additional or revised guidance documents will affect any submittal required by this COPI, Ohio EPA will notify the Defendant and Defendant shall modify such submittal.

## **XI. DEFENDANT'S PROGRESS REPORTS**

50. Unless otherwise directed by Ohio EPA, Defendants shall submit a written progress report to Ohio EPA by the tenth (10) day of every month. At a minimum, each progress report shall:

- A. Identify the Site and activity;
- B. Describe the status of the activities and actions taken towards achieving compliance with this COPI during the reporting period, including any dates of completion of work, and activities which are scheduled for the next month;
- C. Describe difficulties encountered during the reporting period and actions taken to rectify any deficiencies;
- D. Describe activities planned for the next month and the projected completion dates of such activities;
- E. Identify changes in key personnel;
- F. List target and actual completion dates for each element of activity, including project completion;
- G. Include all data generated during the reporting period, including submittal of all raw and validated data received during the reporting period; and
- H. Provide an explanation for any deviation from any applicable schedules.

## **XII. ACCESS TO INFORMATION AND RECORDS RETENTION**

51. Defendant shall provide to Ohio EPA within seven (7) days of a written request,



copies of all non-privileged documents and information within their possession or control, or that of their contractors or agents relating to events or conditions at the Site including, but not limited to, manifests, reports, correspondence, or other documents, photos or audiovisual information related to the activities contemplated under this COPI. Additionally, within seven (7) days of a request by Ohio EPA, Defendant shall submit to Ohio EPA copies of the results of all sampling and/or tests or other data, including raw data and original laboratory reports, generated by or on behalf of Defendant with respect to the Site and /or implementation of this COPI. Defendant shall submit to Ohio EPA any interpretive reports and written explanations concerning the raw data and original laboratory reports. Such interpretive reports and written explanations shall not be submitted in lieu of original laboratory reports and raw data. Should Defendant subsequently discover an error in any report or raw data, Defendant shall promptly notify Ohio EPA of such discovery and provide the correct information.

52. Unless Defendant shows that a document or other information submitted to Ohio EPA pursuant to this COPI is confidential under the provisions of R.C. Section 6111.05(A), Ohio EPA may release the document or other information to the public without notice to Defendants.

53. If Defendant asserts that certain documents or other information are privileged and/or confidential under state law, Defendant shall provide Ohio EPA with the following:

- A. The title of the document or information;
- B. The date of the document or information;
- C. The name and title of the author of the document or information;
- D. The name and title of each addressee and recipient;
- E. A general description of the contents of the document or information; and,
- F. The privilege or basis of confidentiality being asserted by Defendants and the basis for the assertion.



54. No claim of confidentiality or privilege shall be made with respect to any data, including but not limited to, all sampling, analytical, monitoring, or laboratory reports.

55. Defendant shall preserve for the duration of this COPI and for a minimum of ten (10) years after its termination, all documents and other information within its possession or control, or within the possession of its contractors or agents, which in any way relate to this COPI, notwithstanding any document retention policies to the contrary. Defendant may preserve such documents by microfiche, or other electronic or photographic device. At the conclusion of this document retention period, Defendant shall notify Ohio EPA at least sixty (60) days prior to the destruction of these documents or other information; and upon request, shall deliver such documents and other information to Ohio EPA, unless such documents are privileged.

### **XIII. SITE ACCESS**

56. The State of Ohio, its agents and employees, shall have full access to the Site at any and all reasonable times to observe Defendant conducting the work required by this COPI and as may be necessary for the implementation of this COPI.

57. To the extent that the Site or any other property to which access is required for the implementation of this COPI is owned or controlled by persons other than Defendant, Defendant shall use its best efforts to secure from such persons access for Defendant and Ohio EPA as necessary to effectuate this COPI. Copies of all access agreements obtained by Defendant shall be submitted to Ohio EPA within ten (10) days of receipt by Defendant. If any access required to effectuate this COPI is not obtained within thirty (30) days of the entry date of this COPI, or within thirty (30) days of the date that Ohio EPA notifies Defendant in writing that additional access beyond that previously secured is necessary, Defendant shall promptly notify Ohio EPA in writing of the steps Defendant have taken to obtain access. Ohio EPA may, as it deems





appropriate, assist Defendant in obtaining [non-responsive]

58. Nothing in this COPI shall be construed to limit the State's statutory or permit authority under R.C. Chapters 3767 and 6111 or the rules adopted thereunder, or CWA 33 USC § 1311 *et seq.* to obtain or seek [non-responsive] conduct inspections or surveys and/or take samples.

#### **XIV. OVERSIGHT CONTRACTOR COSTS AND REMIBURSEMENT OF COSTS**

59. Within ten (10) days of entry of this COPI, Defendant shall pay to Ohio EPA XXXX dollars (\$XX). This payment shall be made by cashier's or certified check, payable to the order of the "Treasurer, State of Ohio," delivered to the Ohio Environmental Protection Agency, Fiscal Office, Division of [non-responsive] and Remedial Response, P.O. Box 1049, 122 S. Front St., Columbus, Ohio 43216-1049, ATTN: Donna Waggener (or successor). Ohio EPA shall use this money to pay contractor(s) which Ohio EPA may hire to monitor some of the activities performed pursuant to this COPI from the date of its entry through its completion. If funds remain from the XXX hundred thousand dollars at the completion of the activities contemplated by this COPI, such money shall be returned to Defendant.

60. If the XXX dollars is depleted before the completion of compliance with this COPI, Defendant shall pay Ohio EPA, within thirty (30) days of the billing date, for all additional oversight costs incurred by the contractor(s) which may be hired by Ohio EPA.

61. Ohio EPA has incurred and continues to incur Response Costs in connection with the Site. Defendant shall reimburse Ohio EPA for all Response Costs incurred both prior to and after the effective date of this COPI.

62. Within thirty (30) days of receipt of an accounting of Response Costs incurred prior to the effective date of this COPI, Defendant shall remit a check to the Ohio EPA for the full amount claimed.

63. With respect to Response Costs incurred after the effective date of this COPI,



Ohio EPA will submit to Defendant an itemized statement of its Response Costs for the previous year. Within thirty (30) days of receipt of such itemized statement, Defendant shall remit payment for all of Ohio EPA's Response Costs for the previous year.

64. Defendant shall remit payments to Ohio EPA pursuant to this Section as follows:

a. Payment shall be made by certified check payable to "Treasurer, State of Ohio" and shall be forwarded to Fiscal Officer, Ohio EPA, P.O. Box 1049, 1800 Watermark Drive, Columbus, Ohio 43266-0149, ATTN: Edith Long.

b. A copy of the transmittal letter and check shall be sent to the Fiscal Officer, DERR, Ohio EPA, P.O. Box 1049, 1800 Watermark Drive, Columbus, Ohio 43266-0149, ATTN: Patricia Campbell, and to the Site Coordinator.

#### **XV. MODIFICATION**

65. No modification shall be made to this COPI without the written agreement of the Parties and the Court.

#### **XVI. TERMINATION**

66. This COPI shall terminate upon Order of this Court upon Joint Motion of the Parties that all activities required or contemplated under this COPI, including additional work, have been completed and all response costs owed under this COPI have been paid. Nothing herein shall preclude Ohio EPA from seeking further investigatory work in connection with implementation of a remedy or to address an imminent threat of harm to the public health or the environment. This section, and the sections of this COPI on Reservation of Rights and non-responsive to Information and Records Retention, shall survive this Termination provision.

#### **XVII. COMPLIANCE WITH APPLICABLE LAWS, PERMITS AND APPROVALS**

67. All activities undertaken by Defendant pursuant to this COPI shall be undertaken



in accordance with the requirements of all applicable federal, state and local laws, rules, regulations, permits or other authorities. Defendant shall submit timely applications and requests for any such permits and approvals. Where such laws appear to conflict with the other requirements of this COPI, Defendant is ordered and enjoined to immediately notify Ohio EPA of the potential conflict. Defendant is ordered and enjoined to include in all contracts or subcontracts entered into for work required under this COPI, provisions stating that such contractors or subcontractors, including their agents and employees, shall perform all activities required by such contracts or subcontracts in compliance with all applicable laws and rules. This COPI is not a permit issued pursuant to any federal, state or local authority.

#### **XVIII. MISCELLANEOUS**

68. Nothing in this COPI shall affect Defendant's obligation to comply with all applicable federal, state or local law, regulation, rule or ordinance. Defendant shall obtain any and all federal, state, or local permits necessary to comply with this COPI.

69. Defendant shall notify Ohio EPA in writing of the name of the supervising contractor and any and all subcontractors to be used in carrying out the terms of this COPI.

70. This COPI does not constitute authorization or approval of the construction of any physical structure or facilities, or the modification of any existing treatment works or sewer system. Approval for any such construction or modification shall be by permit issued by Ohio EPA or other such permits as may be required by applicable federal, state, or local laws, rules or regulations.

71. Any acceptance by the State of Ohio of any payment, document or other work due under this COPI hereunder subsequent to the time that the obligation is due under this COPI shall not relieve Defendant of the obligation created by the COPI.



### **XIX. APPENDICES**

72. All appendices to this COPI are incorporated by reference as if fully restated herein and are an enforceable part of this COPI. The following appendices are attached to this COPI at the time of signing by the Parties on the effective date:

- a. "Appendix A" is the map of the Site;
- b. "Appendix B" is the list of U.S. EPA and Ohio EPA guidance documents;

### **XX. RETENTION OF JURISDICTION**

73. The Court will retain jurisdiction of this action for the purpose of administering and enforcing Defendant's compliance with this COPI.

### **XXI. COURT COSTS**

74. Defendant shall pay the court costs of this action.

### **XXII. ENTRY OF COPI AND JUDGMENT BY CLERK**

75. Upon the signing of this COPI by the Court, the clerk is directed to enter it upon the journal. Within three (3) days of entering the judgment upon the journal, the clerk is directed to serve upon all parties notice of the judgment and its date of entry upon the journal in the manner prescribed by Rule 5(B) of the Ohio Rules of Civil Procedure and note the service in the appearance docket.

### **XXIII. AUTHORITY TO ENTER INTO THE COPI**

76. Each signatory for a corporation represents and warrants that he/she has been duly





authorized to sign this document and so bind the corporation to all terms and conditions thereof.



**IT IS SO ORDERED:**

Effective upon and entered this \_\_\_\_\_ day of \_\_\_\_\_, 2000.

---

JUDGE

Approved:

BETTY D. MONTGOMERY

Attorney General of Ohio

By:

AK STEEL CORPORATION

By:

---

Kimberly A. Rhoads (0061740)  
Lori A. Massey (0047226)  
Assistant Attorneys General  
Environmental Enforcement Section  
30 East Broad Street, 25th Floor  
Columbus, Ohio 43215-3428  
(614) 466-2766

---

(name)  
(title)  
(address)

*Authorized Representative of  
AK Steel Corporation*

*Attorneys for Plaintiff  
State of Ohio*

---

Christopher Schraff, Esq. (0023020)  
Porter, Wright, Morris & Arthur  
41 South High Street  
Columbus, Ohio 43215  
(614) 227-2000

*Attorneys for Defendant  
AK Steel Corporation*





Mary.Osika@epa.state.oh.us on 06/14/2000 09:25:24 AM

To: Lisa Geist cc: #034#Kimberly#032#A.#032#Rhoads#034##060#KRhoads  
Subject: Re: ak steel field observations

I just faxed some field notes to you on sediment sampling( 5/28/97, 12/12/95, 9/13/95, 10/25/95, 10/12/95) I will have more coming. Here are a few pictures of the sediment sampling. I will e mail more because these bmp files are big (better print quality).

Attached is landfill 1.bmp which is a picture taken 12/7/95 of one of our sediment samplers, Maryanne Mahr. This picture is taken just upstream of the "landfill tributary" on the left bank of Dicks Creek. It may be associated with sample #21 as an identifier on the analysis sheets.

Also attached is landfill 2.bmp which is a picture taken 9/13/95 and titled as Dicks Creek sediment sampling site #71.

Mary Osika  
Division of Surface Water  
(937) 285-6101

>>> <Geist.Lisa@epamail.epa.gov> 06/12/00 05:39PM >>>

Mary -

If you can fax me (312) 353-4342 copies of any field notes for the 1995 samples where PCBs were detected, as well as the 1997 or 1999 field notes, that would be great. You can then send me the hard copies to follow. Were any field notes taken for the October and November 1997 site visits to AK Steel when the white substance was observed? I noticed that these samples were only water samples, not sediment, however. Or, if its easier, perhaps just a memo from you and/or John stating your observations?? Just a thought, but the original notes would be better. Also, any photos of the samples would be great. You can email me scanned versions if its not too much trouble and I can print them out here.

December, 1995, PCBs ranging from 3.12 ppm to 52.6 ppm, field observations?  
1995 Biological and Water Quality Study of 1995, PCBs from 18.33 ppm and 14.3 ppm, field observations?

May, 1997 sediment sampling, PCBs ranging from 0.35 ppm to 32.3 ppm, field observations?

June, 1999 sediment sampling, PCBs at 13.97 ppm and 10.85 ppm, field observations?

Thanks for your help on this!!

Lisa

AK5 041286

 - Landfill 1.bmp

 - Landfill 2.bmp



Mary.Osika@epa.state.oh.us on 06/14/2000 09:33:50 AM

To: Lisa Geist cc: KRhoads  
Subject: Re: ak steel field observations

---

Here are some more pictures....

landfill 3.bmp is a picture taken 9/13/95 titled Dicks Creek  
Sediment sampling site #72. This picture should correlate to the sampling notes I faxed to you.

landfill 3.bmp is a picture taken 12/10/95 of the sediments from the GMR downstream of the AK  
steel outfall 011. I believe we got PAH hits on this one, but no PCBs.

Mary Osika  
Division of Surface Water  
(937) 285-6101

>>> <Geist.Lisa@epamail.epa.gov> 06/12/00 05:39PM >>>

Mary -

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1995 Biological and Water Quality Study of 1995, PCBs from 18.33 ppm and 14.3 ppm, field observations?  
May, 1997 sediment sampling, PCBs ranging from 0.35 ppm to 32.3 ppm, field observations?  
June, 1999 sediment sampling, PCBs at 13.97 ppm and 10.85 ppm, field observations?

Thanks for your help on this!!

Lisa



- Landfill 3.bmp

AK5 041288



- Landfill 4.bmp

AK5 041289





Mary.Osika@epa.state.oh.us on 06/14/2000 09:39:31 AM

To: Lisa Geist cc: KRhoads  
Subject: Re: ak steel field observations

---

More pictures.....

landfill 5.bmp is a picture taken 12/7/95 titled sediment from landfill tributary to Dicks Creek

landfill 6.bmp is a picture taken 12/7/95 titled landfill tributary seepage from closed landfill.

landfill 7.bmp is another picture of the above. That's it for pictures that I am sending. We have others but not as good as these. I'll be sending more field notes that were recorded on the analysis sheets to the lab. I will also check my inspection notes from the sampling in 1999.

Mary Osika  
Division of Surface Water  
(937) 285-6101

>>> <Geist.Lisa@epamail.epa.gov> 06/12/00 05:39PM >>>

Mary -

If you can fax me (312) 353-4342 copies of any field notes for the 1995 samples where PCBs were detected, as well as the 1997 or 1999 field notes, that would be great. You can then send me the hard copies to follow. Were any field notes taken for the October and November 1997 site visits to AK Steel when the white substance was observed? I noticed that these samples were only water samples, not sediment, however. Or, if its easier, perhaps just a memo from you and/or John stating your observations?? Just a thought, but the original notes would be better. Also, any photos of the samples would be great. You can email me scanned versions if its not too much trouble and I can print them out here.

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May, 1997 sediment sampling, PCBs ranging from 0.35 ppm to 32.3 ppm, field observations?

June, 1999 sediment sampling, PCBs at 13.97 ppm and 10.85 ppm, field observations?

Thanks for your help on this!!

Lisa

AK5 041290



- Landfill 5.bmp



- Landfill 6.bmp



- Landfill 7.bmp



RDarnell@enrd.usdoj.gov on 06/08/2000 12:29:32 PM

To: Michael Mikulka, Robert Guenther  
Subject: FW: comments on revised 7003 Order

---

-----Original Message-----

From: Kimberly A. Rhoads [mailto:KRhoads@ag.state.oh.us]  
Sent: Thursday, June 08, 2000 12:03 PM  
To: Darnell, Robert  
Cc: 'joe.koncelik(a)epa.state.oh.us';  
'harold.oconnell(a)epa.state.oh.us'; 'jeff.hines(a)epa.state.oh.us';  
'randy.bournique(a)epa.state.oh.us'; Robert J. Karl; Lori A. Massey  
Subject: comments on revised 7003 Order

Robert-

Please find attached comments from Ohio EPA and the Ohio AGO on the revised 7003 Order, which includes a caveat with regarding to the ongoing discussions between Ohio EPA and USEPA. Please call me with any questions or concerns.

<<DOJ7003B.doc>>

<<DOJ7003B.doc>>



- att1.htm



- DOJ7003B.doc



Attorney-Client Privilege - Work Product in Anticipation of Litigation  
June 6, 2000  
page 1

Ohio EPA/ Ohio AGO  
Comments on USEPA 7003 Order (draft 5/30/00)

**\*\*Caveat: this comments relate *only* to the technical aspects of the 7003 order – the policy and litigation strategy concerns are still being discussed between Ohio EPA and Region V (Joe Koncelik, Deputy Director of Legal and Joe Boyle, Chief Enforcement and Compliance Assurance)**

*both same*

II DEFINITIONS

The order should provide a definition for solid waste for order requirements including sampling, assessment, and prevention of migration. For example, there is both a statutory definition (i.e., RCRA Section 1004 (27)) and a regulatory definition (i.e., 40 CFR Part 261). The statutory definition appears to be broader in scope and is appropriate for 7003 orders.

III. FINDINGS OF FACT

No further comments/suggested revisions

III. CONCLUSIONS OF LAW

No further comments/suggested revisions

VIII. ORDER

*Finkelson*

Page 22; ¶ 91.

*Added in OERD results*

Under the continuation of ¶ 91 from the previous page, the last sentence of the first paragraph states: "No PAHs were detected in the sample upstream of the AK Steel operations in the landfill tributary, at Todhunter Road." This section discusses US EPA sediment results, however makes no reference of Ohio EPA results from that split which detected a total PAH concentration of 6.92 mg/kg from this same location. USEPA may have made a conscious decision to discuss only their results in this section, but it may appear awkward because Ohio EPA results were used so heavily as evidence for this case. They may have already thought this through, but we just wanted to point it out.

Page 31; ¶ o.

Page 33; ¶ r.

RELEASED  
DATE \_\_\_\_\_  
BY \_\_\_\_\_  
REASON \_\_\_\_\_

**Attorney-Client Privilege - Work Product in Anticipation of Litigation**  
**June 6, 2000**  
**page 2**

**Recommend elimination of "visual inspection" as basis for initial performance standard for sediment removal requirements**

This initial performance standard for sediment removal should be removed from the order. It may be perceived as subjective and may introduce questions regarding the relationship between removal of visible contamination and the elimination of the identified threat to human health and the environment. Instead, the Dick's Creek Sediment Report should contain a proposal for the final sediment remedial performance standards. This proposal will consider the results of the risk assessment for human and ecological receptors and acceptable risk management procedures.

If an initial requirement is thought to be essential to the order, an additional alternative is that U.S. EPA could provide a preliminary goal for PCBs in sediment. This could form the basis for an initial performance value. This preliminary goal could become the final remedial number by default if an appropriate submittal is not received from AK within the time provided in the order.

o. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. Proposals for the remedy of the PCB and PAH contaminated sediments, as well as any other identified potential imminent and substantial endangerments to human health and the environment, must be done in accordance with U.S. EPA risk assessment, risk management, and RCRA guidance.

**Note:** Language was also added to the requirements that all newly identified potential imminent and substantial endangerments to human health and the environment specific to sediment must also be remedied in this plan.





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**June 6, 2000**  
**page 3**

- p. ~~The initial performance standard for remediation of the landfill tributary and Dick's Creek will be removal of all visibly contaminated materials with analytical confirmation that acceptable residual concentrations have been achieved. Final proposed remedial measures must be consistent with acceptable risk management and engineering practice.~~

Page 30; ¶ j.

Page 30; ¶ k.

Page 36; ¶ bb.

**Recommend ensuring that sampling, assessment, and monitoring plans are consistent in the scope of chemicals evaluated by requirements in the order**

In addition to PCBs and PAHs, there may be other hazardous constituents resulting from solid waste handling at the slag processing area which may be contributing to an imminent and substantial endangerment to human health and the environment. The final performance standards imply that these impacts may need to be addressed yet the order is silent on assessment requirements in earlier requirements of the process. For example, the stated purpose of the Fish Sampling Plan (Paragraph bb) is to assess the "presence of any impacts from waste materials (e.g., PCBs PAHs, and other semi-volatile compounds, and heavy metals)." These same chemical constituents should also be addressed in the Sediment Sampling Plan (Paragraph j) as it investigates sediment and surface water quality issues. The language for the Sediment Sampling Plan specifies PCBs and PAHs and notes that those chemicals are not inclusive of all that must be sampled. It would be more transparent to spell out the universe of chemical constituents for which U.S. EPA expects assessment to occur.

Suggested Language:

- j. Within 30 days of the effective date of this Order, AK Steel must submit a plan to conduct an investigation of sediment and surface water quality in Dick's Creek ("Sediment Sampling Plan"), specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area including, but not limited to, the presence of PCBs and PAHs in sediments and surface waters of Dick's Creek and the landfill tributary (i.e., from the confluence of Dick's Creek with the Great Miami River to upstream of AK Steel outfall 003, the drainage swales on the west side of closed landfill #1, discharge channels associated with outfalls 002 and 003, and any

*NOT LIMITED  
TO SLAG  
PROCESSING, OR  
HOW MANY PCBs  
BE @ OUTFALL  
2 & 3?*



polishing or settling ponds associated with these outfalls).

- k. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. This report must also address any imminent and substantial endangerments to human health and the environment specific to sediment which come to be known by work conducted under this order and are specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area.
- bb. By March 1, 2001, AK Steel must prepare and submit a plan to sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and its tributaries ("Fish Sampling Plan"). AK Steel must obtain OEPA's approval of the Fish Sampling Plan prior to its implementation. Sampling must occur every three years beginning in the summer of 2001 and continuing through 2010. The sampling efforts must evaluate the presence of any impacts from ~~waste materials, e.g., PCBs, PAHs and other semi-volatile compounds, and heavy metals.~~ the handling of solid waste in the slag processing area.

Note: *Under comments regarding "j." and "bb.", additions were made to the language specifying the slag processing area. Since PCBs and PAH's were detected contaminants in other areas not associated with slag processing, we may be hesitant in adding specific reference to this site within those sections. Although the most concentrated concentrations were detected associated with the landfill and slag processing area, the contamination is not limited to or solely associated with those areas. It may limit the intent of the sections if we specifically add the slag processing area language.*



**Attorney-Client Privilege - Work Product in Anticipation of Litigation**  
**June 6, 2000**  
**page 5**

Page 35; ¶ t.

It is imperative US EPA keep the stream restoration language in this order. We found out Friday, June 2, 2000, that AK Steel may be able to conduct the clean up under a Nationwide 38 permit from US Army Corps of Engineers which covers hazardous substance clean up of sediments. If that is the case, Ohio EPA may not have the authority to issue a 401 Water Quality Certification (WQC). We're waiting on an answer from CO to determine if we would be able to request from ACOE that this project be required to get the 401 WQC from Ohio EPA. USEPA should add language to this order requiring AK Steel to obtain all necessary permits from all regulatory agencies to conduct a clean up of Dicks Creek and associated tributaries.

**Note:** *As a follow-up to the question as to whether or not we can require a 401 with the nationwide in which we state restoration requirements, DSW/CO provided the following response:*

- 1) First, we need to know for sure whether the Corps or USEPA will cover this under NWP #38. It sounds like it may qualify, but the feds have to make that determination.*
- 2) Mitigation requirements can be written up in the orders. We can work with USEPA on that. But if it is covered under NWP #38, we can not independently require mitigation.*
- 3) We can not require a 401 Certification if the entity meets the requirements of NWP #38 and if the feds are going to use that NWP. However, we can request an individual review. But it would be unlikely that the feds would allow this.*



**Attorney-Client Privilege - Work Product in Anticipation of Litigation**  
**June 9, 2000** **page 1**

**USEPA Response to OEPA/OAG Comments on 7003 Order**

**II. DEFINITIONS**

The order should provide a definition for solid waste for order requirements including sampling, assessment, and prevention of migration. For example, there is both a statutory definition (i.e., RCRA Section 1004 (27)) and a regulatory definition (i.e., 40 CFR Part 261). The statutory definition appears to be broader in scope and is appropriate for 7003 orders.

**Response:** It should be clear from the construct of the Act that the broad definition applies in an action under 7003. No changes are proposed.

**III. FINDINGS OF FACT**

Page 22; ¶ 91.

Under the continuation of ¶ 91 from the previous page, the last sentence of the first paragraph states: "No PAHs were detected in the sample upstream of the AK Steel operations in the landfill tributary, at Todhunter Road." This section discusses US EPA sediment results, however makes no reference of Ohio EPA results from that split which detected a total PAH concentration of 6.92 mg/kg from this same location. USEPA may have made a conscious decision to discuss only their results in this section, but it may appear awkward because Ohio EPA results were used so heavily as evidence for this case. They may have already thought this through, but we just wanted to point it out.

**Response:** It is appropriate to include the OEPA result. This paragraph has been modified to incorporate the OEPA result.

**III. CONCLUSIONS OF LAW**

No further comments/suggested revisions

**VIII. ORDER**

Page 31; ¶ o.

Page 33; ¶ r. The initial default performance standard for remediation of the landfill tributary and Dick's Creek will be removal of all visibly contaminated sediments, with analytical confirmation that acceptable residual concentrations have been achieved. Any final proposed remedial measures must be consistent with acceptable risk management and engineering

1. What is the purpose of the study?  
 The purpose of the study is to investigate the effect of a new teaching method on student performance.

2. What are the research questions?  
 The research questions are: (a) Does the new teaching method improve student performance? (b) What factors influence the effectiveness of the new teaching method?

3. What is the significance of the study?  
 The significance of the study is that it provides valuable information about the effectiveness of the new teaching method, which can be used to improve teaching practices and student performance.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



practice, and will only supercede the default performance standard if approved by USEPA.

**OEPA recommends elimination of "visual inspection" as the basis for initial performance standard for sediment removal requirements**

This initial performance standard for sediment removal should be removed from the order. It may be perceived as subjective and may introduce questions regarding the relationship between removal of visible contamination and the elimination of the identified threat to human health and the environment. Instead, the Dick's Creek Sediment Report should contain a proposal for the final sediment remedial performance standards. This proposal will consider the results of the risk assessment for human and ecological receptors and acceptable risk management procedures.

**Response:** The rationale for the "removal of all visibly contaminated sediments, with analytical confirmation that acceptable residual concentrations have been achieved" was as follows: Water sampling has documented the discharge of measurable quantities of PCBs into the landfill tributary. Sediment sampling has confirmed the presence of PCBs, PAHs and other constituents in the sediments of the landfill tributary and Dick's Creek. Visual and olfactory observations by OEPA and USEPA have documented that the sediments in the landfill tributary are visibly contaminated to a depth of at least six inches in the tributary. This visual contamination was more prevalent in the finer grained sediments than the coarser-grained sediments, although the coarser-grained sediments were also clearly contaminated. Removal of the visibly contaminated sediments will more than likely also remove the PCB and PAH contamination. This would then be confirmed by analytical data of the surface sediments. This does not seem subjective to us. It is also noted that the initial standard was more subjective as originally stated within the demand letter sent. We added the provision for confirmatory sampling in order to analytically confirm that the residual PCB and PAH numbers are low. The tributary can then be backfilled/restored with clean material. The remainder of the language leaves the door open for development of an alternate approach for Dick's Creek, where we don't have as much data, and perhaps a different technical approach to remediation may be more appropriate. This flexibility was added as suggested by AK Steel at the pre-filing meeting. The perceived



problem with not specifying anything as an initial performance standard is that it doesn't require AK to do anything.

We would therefore propose to leave the initial performance standard within the Order, but are open to suggestion as to how it can be strengthened.

If an initial requirement is thought to be essential to the order, an additional alternative is that U.S. EPA could provide a preliminary goal for PCBs in sediment. This could form the basis for an initial performance value. This preliminary goal could become the final remedial number by default if an appropriate submittal is not received from AK within the time provided in the order.

**Response:** The problem with specifying a number is that any number we specify is arbitrary. We have not back-calculated a number for PCBs based on some hypothetical improvement in fish-tissue PCBs. As such, specifying a number would seem less defensible than the currently proposed performance standard.

o. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. *Proposals for the remedy of the PCB and PAH contaminated sediments, as well any other identified potential imminent and substantial endangerments to human health and the environment, must be done in accordance with U.S. EPA risk assessment, risk management, and RCRA guidance.*

**Note:** *Language was also added to the requirements that all newly identified potential imminent and substantial endangerments to human health and the environment specific to sediment must also be remedied in this plan.*

**Response:** We agree with OEPA's suggested addition, and will incorporate it into the Order.



Page 36; ¶ bb.

**OEPA recommends ensuring that sampling, assessment, and monitoring plans are consistent in the scope of chemicals evaluated by requirements in the order.**

In addition to PCBs and PAHs, there may be other hazardous constituents resulting from solid waste handling at the slag processing area which may be contributing to an imminent and substantial endangerment to human health and the environment. The final performance standards imply that these impacts may need to be addressed yet the order is silent on assessment requirements in earlier requirements of the process. For example, the stated purpose of the Fish Sampling Plan (Paragraph bb) is to assess the "presence of any impacts from waste materials (e.g., PCBs PAHs, and other semi-volatile compounds, and heavy metals)." These same chemical constituents should also be addressed in the Sediment Sampling Plan (Paragraph j) as it investigates sediment and surface water quality issues. The language for the Sediment Sampling Plan specifies PCBs and PAHs and notes that those chemicals are not inclusive of all that must be sampled. It would be more transparent to spell out the universe of chemical constituents for which U.S. EPA expects assessment to occur.

Suggested Language:

j. Within 30 days of the effective date of this Order, AK Steel must submit a plan to conduct an investigation of sediment and surface water quality in Dick's Creek ("Sediment Sampling Plan"), **specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area** including, but not limited to, the presence of PCBs and PAHs in sediments and surface waters of Dick's Creek and the landfill tributary (i.e., from the confluence of Dick's Creek with the Great Miami River to upstream of AK Steel outfall 003, the drainage swales on the west side of closed landfill #1, discharge channels associated with outfalls 002 and 003, and any polishing or settling ponds associated with these outfalls).

k. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. **This report must also address any imminent and substantial endangerments to human health and the environment specific to sediment which come to be known by work conducted under this order and are**





specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area.

bb. By March 1, 2001, AK Steel must prepare and submit a plan to sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and its tributaries ("Fish Sampling Plan"). AK Steel must obtain OEPA's approval of the Fish Sampling Plan prior to its implementation. Sampling must occur every three years beginning in the summer of 2001 and continuing through 2010. The sampling efforts must evaluate the presence of any impacts from ~~waste materials, e.g., PCBs, PAHs and other semi-volatile compounds, and heavy metals.~~ the handling of solid waste in the slag processing area.

Note: *Under comments regarding "j." and "bb.", additions were made to the language specifying the slag processing area. Since PCBs and PAH's were detected contaminants in other areas not associated with slag processing, we may be hesitant in adding specific reference to this site within those sections. Although the most concentrated concentrations were detected associated with the landfill and slag processing area, the contamination is not limited to or solely associated with those areas. It may limit the intent of the sections if we specifically add the slag processing area language.*

**Response: We agree that the existing language needs to be tweaked. However, the suggestion limits the study scope to releases from the slag processing area, whereas ours is more broad, and covers releases through outfalls 002 and 003. So we can't limit it to the slag processing area. We will come up with alternate language.**

Page 35; ¶ t.

It is imperative US EPA keep the stream restoration language in this order. We found out Friday, June 2, 2000, that AK Steel may be able to conduct the clean up under a Nationwide 38 permit from US Army Corps of Engineers which covers hazardous substance clean up of sediments. If that is the case, Ohio EPA may not have the authority to issue a 401 Water Quality Certification (WQC). We're waiting on an answer from CO to determine if we would be able to request from ACOE that this project be required to get the 401 WQC from Ohio EPA. USEPA should add language to this order requiring AK Steel to obtain all necessary permits from all regulatory agencies to conduct a clean up of Dicks Creek and associated tributaries.





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**June 9, 2000** **page 6**

Note: As a follow-up to the question as to whether or not we can require a 401 with the nationwide in which we state restoration requirements, DSW/CO provided the following response:

- 1) First, we need to know for sure whether the Corps or USEPA will cover this under NWP #38. It sounds like it may qualify, but the feds have to make that determination.
- 2) Mitigation requirements can be written up in the orders. We can work with USEPA on that. But if it is covered under NWP #38, we can not independently require mitigation.
- 3) We can not require a 401 Certification if the entity meets the requirements of NWP #38 and if the feds are going to use that NWP. However, we can request an individual review. But it would be unlikely that the feds would allow this.

**Response: The Order requires that AK comply with all federal state and local laws. The language requires restoration, even if a NW #38 permit is issued. We have experience with other cases (Detroit district), where restoration is required by the Nationwide 38 permit. No proposed changes to the Order as drafted.**



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**June 9, 2000** **page 1**

**USEPA Response to OEPA/OAG Comments on 7003 Order**

**II DEFINITIONS**

The order should provide a definition for solid waste for order requirements including sampling, assessment, and prevention of migration. For example, there is both a statutory definition (i.e., RCRA Section 1004 (27)) and a regulatory definition (i.e., 40 CFR Part 261). The statutory definition appears to be broader in scope and is appropriate for 7003 orders.

**Response:** It should be clear from the construct of the Act that the broad definition applies in an action under 7003. No changes are proposed.

**III. FINDINGS OF FACT**

Page 22; ¶ 91.

Under the continuation of ¶ 91 from the previous page, the last sentence of the first paragraph states: "No PAHs were detected in the sample upstream of the AK Steel operations in the landfill tributary, at Todhunter Road." This section discusses US EPA sediment results, however makes no reference of Ohio EPA results from that split which detected a total PAH concentration of 6.92 mg/kg from this same location. USEPA may have made a conscious decision to discuss only their results in this section, but it may appear awkward because Ohio EPA results were used so heavily as evidence for this case. They may have already thought this through, but we just wanted to point it out.

**Response:** It is appropriate to include the OEPA result. This paragraph has been modified to incorporate the OEPA result.

**III. CONCLUSIONS OF LAW**

No further comments/suggested revisions

**VIII. ORDER**

Page 31; ¶ o.

Page 33; ¶ r. The initial default performance standard for remediation of the landfill tributary and Dick's Creek will be removal of all visibly contaminated sediments, with analytical confirmation that acceptable residual concentrations have been achieved. Any final proposed remedial measures must be consistent with acceptable risk

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**June 9, 2000** **page 2**

management and engineering practice, and will only supercede the default performance standard if approved by USEPA.

**OEPA recommends elimination of "visual inspection" as the basis for initial performance standard for sediment removal requirements**

This initial performance standard for sediment removal should be removed from the order. It may be perceived as subjective and may introduce questions regarding the relationship between removal of visible contamination and the elimination of the identified threat to human health and the environment. Instead, the Dick's Creek Sediment Report should contain a proposal for the final sediment remedial performance standards. This proposal will consider the results of the risk assessment for human and ecological receptors and acceptable risk management procedures.

**Response: The rationale for the "removal of all visibly contaminated sediments, with analytical confirmation that acceptable residual concentrations have been achieved" was as follows: Water sampling has documented the discharge of measurable quantities of PCBs into the landfill tributary. Sediment sampling has confirmed the presence of PCBs, PAHs and other constituents in the sediments of the landfill tributary and Dick's Creek. Visual and olfactory observations by OEPA and USEPA have documented that the sediments in the landfill tributary are visibly contaminated to a depth of at least six inches in the tributary. This visual contamination was more prevalent in the finer grained sediments than the coarser-grained sediments, although the coarser-grained sediments were also clearly contaminated. Removal of the visibly contaminated sediments will more than likely also remove the PCB and PAH contamination. This would then be confirmed by analytical data of the surface sediments. This does not seem subjective to us. It is also noted that the initial standard was more subjective as originally stated within the demand letter sent. We added the provision for confirmatory sampling in order to analytically confirm that the residual PCB and PAH numbers are low. The tributary can then be backfilled/restored with clean material. The remainder of the language leaves the door open for development of an alternate approach for Dick's Creek, where we don't have as much data, and perhaps a different technical approach to remediation may be more appropriate. This flexibility was added as suggested by AK Steel at the pre-filing meeting. The perceived**

AK5 041312

problem with not specifying anything as an initial performance standard is that it doesn't require AK to do anything.

We would therefore propose to leave the initial performance standard within the Order, but are open to suggestion as to how it can be strengthened.

If an initial requirement is thought to be essential to the order, an additional alternative is that U.S. EPA could provide a preliminary goal for PCBs in sediment. This could form the basis for an initial performance value. This preliminary goal could become the final remedial number by default if an appropriate submittal is not received from AK within the time provided in the order.

**Response:** The problem with specifying a number is that any number we specify is arbitrary. We have not back-calculated a number for PCBs based on some hypothetical improvement in fish-tissue PCBs. As such, specifying a number would seem less defensible than the currently proposed performance standard.

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*Note: Language was also added to the requirements that all newly identified potential imminent and substantial endangerments to human health and the environment specific to sediment must also be remedied in this plan.*

Response: We agree with OEPA's suggested addition, and will incorporate it into the Order.

Page 30; ¶ k.

Page 36; ¶ bb.

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In addition to PCBs and PAHs, there may be other hazardous constituents resulting from solid waste handling at the slag processing area which may be contributing to an imminent and substantial endangerment to human health and the environment. The final performance standards imply that these impacts may need to be addressed yet the order is silent on assessment requirements in earlier requirements of the process. For example, the stated purpose of the Fish Sampling Plan (Paragraph bb) is to assess the "presence of any impacts from waste materials (e.g., PCBs PAHs, and other semi-volatile compounds, and heavy metals)." These same chemical constituents should also be addressed in the Sediment Sampling Plan (Paragraph j) as it investigates sediment and surface water quality issues. The language for the Sediment Sampling Plan specifies PCBs and PAHs and notes that those chemicals are not inclusive of all that must be sampled. It would be more transparent to spell out the universe of chemical constituents for which U.S. EPA expects assessment to occur.

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k. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. This report must also address any imminent and substantial endangerments to human health and the



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**June 9, 2000** **page 5**

environment specific to sediment which come to be known by work conducted under this order and are specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area.

bb. By March 1, 2001, AK Steel must prepare and submit a plan to sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and its tributaries ("Fish Sampling Plan"). AK Steel must obtain OEPA's approval of the Fish Sampling Plan prior to its implementation. Sampling must occur every three years beginning in the summer of 2001 and continuing through 2010. The sampling efforts must evaluate the presence of any impacts from ~~waste materials, e.g., PCBs, PAHs and other semi-volatile compounds, and heavy metals.~~ the handling of solid waste in the slag processing area.

**Note:** *Under comments regarding "j." and "bb.", additions were made to the language specifying the slag processing area. Since PCBs and PAH's were detected contaminants in other areas not associated with slag processing, we may be hesitant in adding specific reference to this site within those sections. Although the most concentrated concentrations were detected associated with the landfill and slag processing area, the contamination is not limited to or solely associated with those areas. It may limit the intent of the sections if we specifically add the slag processing area language.*

**Response:** We agree that the existing language needs to be tweaked. However, the suggestion limits the study scope to releases from the slag processing area, whereas ours is more broad, and covers releases through outfalls 002 and 003. So we can't limit it to the slag processing area. We will come up with alternate language.

Page 35; ¶ t.

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AK5 041315

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**June 9, 2000** **page 6**

Note: As a follow-up to the question as to whether or not we can require a 401 with the nationwide in which we state restoration requirements, DSW/CO provided the following response:

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**Response: The Order requires that AK comply with all federal state and local laws. The language requires restoration, even if a NW #38 permit is issued. We have experience with other cases (Detroit district), where restoration is required by the Nationwide 38 permit. No proposed changes to the Order as drafted.**

AK5 041316



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**June 6, 2000**  
**page 1**

**Ohio EPA/ Ohio AGO**  
**Comments on USEPA 7003 Order (draft 5/30/00)**

**\*\*Caveat: this comments relate *only* to the technical aspects of the 7003 order – the policy and litigation strategy concerns are still being discussed between Ohio EPA and Region V (Joe Koncelik, Deputy Director of Legal and Joe Boyle, Chief Enforcement and Compliance Assurance)**

**II DEFINITIONS**

The order should provide a definition for solid waste for order requirements including sampling, assessment, and prevention of migration. For example, there is both a statutory definition (i.e., RCRA Section 1004 (27)) and a regulatory definition (i.e., 40 CFR Part 261). The statutory definition appears to be broader in scope and is appropriate for 7003 orders.

**III. FINDINGS OF FACT**

No further comments/suggested revisions

**III. CONCLUSIONS OF LAW**

No further comments/suggested revisions

**VIII. ORDER**

Page 22; ¶ 91.

Under the continuation of ¶ 91 from the previous page, the last sentence of the first paragraph states: "No PAHs were detected in the sample upstream of the AK Steel operations in the landfill tributary, at Todhunter Road." This section discusses US EPA sediment results, however makes no reference of Ohio EPA results from that split which detected a total PAH concentration of 6.92 mg/kg from this same location. USEPA may have made a conscious decision to discuss only their results in this section, but it may appear awkward because Ohio EPA results were used so heavily as evidence for this case. They may have already thought this through, but we just wanted to point it out.

Page 31; ¶ o.

Page 33; ¶ r.

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INITIALS \_\_\_\_\_

**Recommend elimination of "visual inspection" as basis for initial performance standard for sediment removal requirements**

This initial performance standard for sediment removal should be removed from the order. It may be perceived as subjective and may introduce questions regarding the relationship between removal of visible contamination and the elimination of the identified threat to human health and the environment. Instead, the Dick's Creek Sediment Report should contain a proposal for the final sediment remedial performance standards. This proposal will consider the results of the risk assessment for human and ecological receptors and acceptable risk management procedures.

If an initial requirement is thought to be essential to the order, an additional alternative is that U.S. EPA could provide a preliminary goal for PCBs in sediment. This could form the basis for an initial performance value. This preliminary goal could become the final remedial number by default if an appropriate submittal is not received from AK within the time provided in the order.

o. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. Proposals for the remedy of the PCB and PAH contaminated sediments, as well as any other identified potential imminent and substantial endangerments to human health and the environment, must be done in accordance with U.S. EPA risk assessment, risk management, and RCRA guidance.

*Note: Language was also added to the requirements that all newly identified potential imminent and substantial endangerments to human health and the environment specific to sediment must also be remedied in this plan.*

p. ~~The initial performance standard for remediation of the landfill tributary~~



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**June 6, 2000**  
**page 3**

~~and Dick's Creek will be removal of all visibly contaminated materials with analytical confirmation that acceptable residual concentrations have been achieved. Final proposed remedial measures must be consistent with acceptable risk management and engineering practice.~~

Page 30; ¶ j.

Page 30; ¶ k.

Page 36; ¶ bb.

**Recommend ensuring that sampling, assessment, and monitoring plans are consistent in the scope of chemicals evaluated by requirements in the order**

In addition to PCBs and PAHs, there may be other hazardous constituents resulting from solid waste handling at the slag processing area which may be contributing to an imminent and substantial endangerment to human health and the environment. The final performance standards imply that these impacts may need to be addressed yet the order is silent on assessment requirements in earlier requirements of the process. For example, the stated purpose of the Fish Sampling Plan (Paragraph bb) is to assess the "presence of any impacts from waste materials (e.g., PCBs PAHs, and other semi-volatile compounds, and heavy metals)." These same chemical constituents should also be addressed in the Sediment Sampling Plan (Paragraph j) as it investigates sediment and surface water quality issues. The language for the Sediment Sampling Plan specifies PCBs and PAHs and notes that those chemicals are not inclusive of all that must be sampled. It would be more transparent to spell out the universe of chemical constituents for which U.S. EPA expects assessment to occur.

Suggested Language:

j. Within 30 days of the effective date of this Order, AK Steel must submit a plan to conduct an investigation of sediment and surface water quality in Dick's Creek ("Sediment Sampling Plan"), specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area including, but not limited to, the presence of PCBs and PAHs in sediments and surface waters of Dick's Creek and the landfill tributary (i.e., from the confluence of Dick's Creek with the Great Miami River to upstream of AK Steel outfall 003, the drainage swales on the west side of closed landfill #1, discharge channels associated with outfalls 002 and 003, and any polishing or settling ponds associated with these outfalls).

**AK5 041308**



**Attorney-Client Privilege - Work Product in Anticipation of Litigation**  
**June 6, 2000**  
**page 4**

- k. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a workplan to remove or otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. This report must also address any imminent and substantial endangerments to human health and the environment specific to sediment which come to be known by work conducted under this order and are specific to impacts on Dick's Creek from the handling of solid waste in the slag processing area.
- bb. By March 1, 2001, AK Steel must prepare and submit a plan to sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and its tributaries ("Fish Sampling Plan"). AK Steel must obtain OEPA's approval of the Fish Sampling Plan prior to its implementation. Sampling must occur every three years beginning in the summer of 2001 and continuing through 2010. The sampling efforts must evaluate the presence of any impacts from waste materials, e.g., PCBs, PAHs and other semi-volatile compounds, and heavy metals, the handling of solid waste in the slag processing area.

Note: Under comments regarding "j." and "bb.", additions were made to the language specifying the slag processing area. Since PCBs and PAH's were detected contaminants in other areas not associated with slag processing, we may be hesitant in adding specific reference to this site within those sections. Although the most concentrated concentrations were detected associated with the landfill and slag processing area, the contamination is not limited to or solely associated with those areas. It may limit the intent of the sections if we specifically add the slag processing area language.





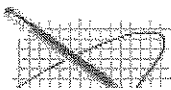
**Attorney-Client Privilege - Work Product in Anticipation of Litigation**  
**June 6, 2000**  
**page 5**

found out Friday, June 2, 2000, that AK Steel may be able to conduct the clean up under a Nationwide 38 permit from US Army Corps of Engineers which covers hazardous substance clean up of sediments. If that is the case, Ohio EPA may not have the authority to issue a 401 Water Quality Certification (WQC). We're waiting on an answer from CO to determine if we would be able to request from ACOE that this project be required to get the 401 WQC from Ohio EPA. USEPA should add language to this order requiring AK Steel to obtain all necessary permits from all regulatory agencies to conduct a clean up of Dicks Creek and associated tributaries.

**Note:** *As a follow-up to the question as to whether or not we can require a 401 with the nationwide in which we state restoration requirements, DSW/CO provided the following response:*

- 1) First, we need to know for sure whether the Corps or USEPA will cover this under NWP #38. It sounds like it may qualify, but the feds have to make that determination.*
- 2) Mitigation requirements can be written up in the orders. We can work with USEPA on that. But if it is covered under NWP #38, we can not independently require mitigation.*
- 3) We can not require a 401 Certification if the entity meets the requirements of NWP #38 and if the feds are going to use that NWP. However, we can request an individual review. But it would be unlikely that the feds would allow this.*





Mark Moloney

06/06/00 02:03 PM

To: Michael Mikulka/R5/USEPA/US@EPA

cc:

Subject: AK Steel PCB sediment sample taken by USEPA on 6/19/96

Mike:

I reviewed our records regarding the sediment sample collected on 6/19/96 @ 1340 from the Monroe drainage ditch near the confluence with Dicks Creek. This sample was collected from approximately the center of the ditch just downstream of a concrete lined section of the stream but upstream of the confluence of the ditch with Dicks Creek. The sample was split with Fore Testing Laboratories Inc. of Miamisburg, Ohio, a contractor working for the company. We have a copy of Fore's testing results. They indicate that the split sample was determined to be non detect for aroclors. This data is contained in a report entitled "Results of Sediment Sampling at AK Steel Middletown Works and Surrounding Tributaries for the Purpose of Determining PCB Concentrations January through October, 1996".

The report describes the USEPA Sampling as follows: " USEPA Sample of Monroe Drainage Ditch. This sample was collected during the United States Environmental Protection Agency (USEPA) inspection by a representative of the Agency. The samples were collected from the top 2" - 3" of the sediment layer. The samples were split (between the USEPA and FTL) in the field. No PCBs were detected in the sample.". The report contains a map showing the sampling location.

I took five photographs of this area on 6/19/96. Three photos are views upstream and downstream along Dicks Creek ( two show the confluence with the Monroe ditch) and two photos taken from the sediment sampling location looking upstream and downstream along Monroe ditch.

I have attached copies of the the photos, a copy of Fore's map showing the sampling location and a two page document showing Fore's sampling results for the split sample. File akpho2 is the view from the sediment sampling location upstream and downstream on Monroe ditch.



akpho1.b



akpho2.b



akdwg1.w



akdata1.w

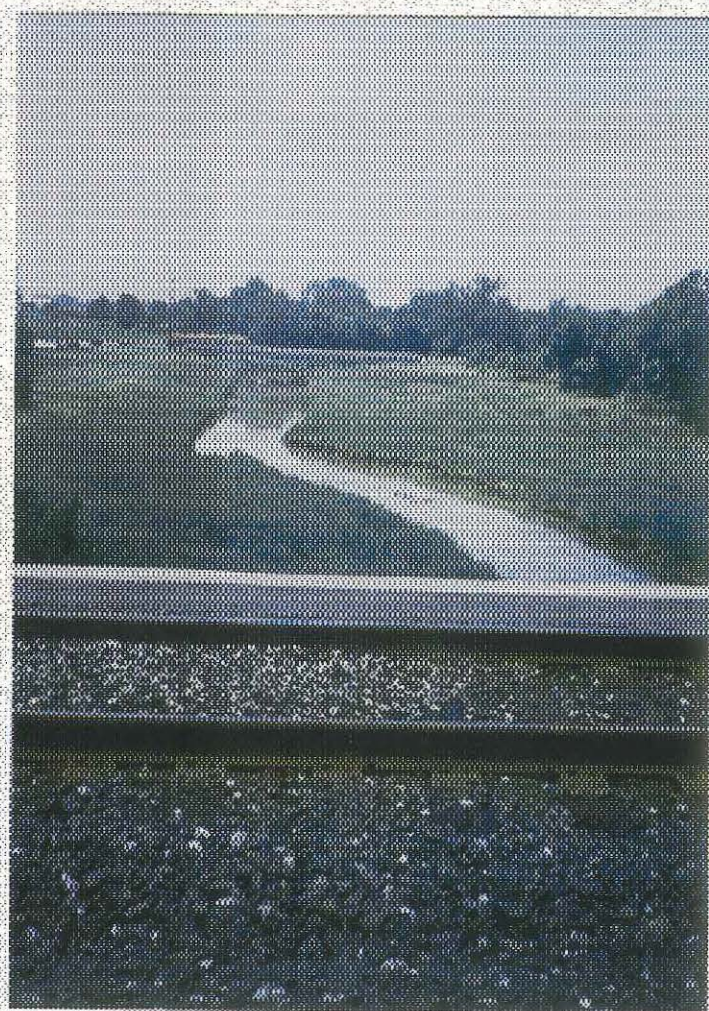
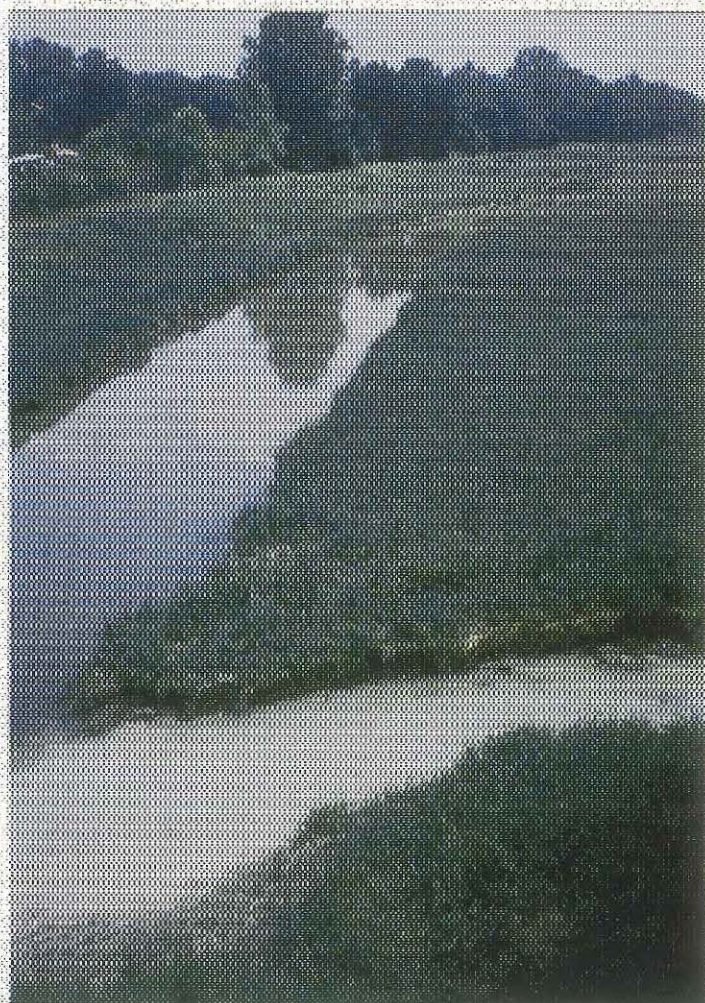
If you have any questions give me a call - 440-250-1709

Mark

AK5 044169



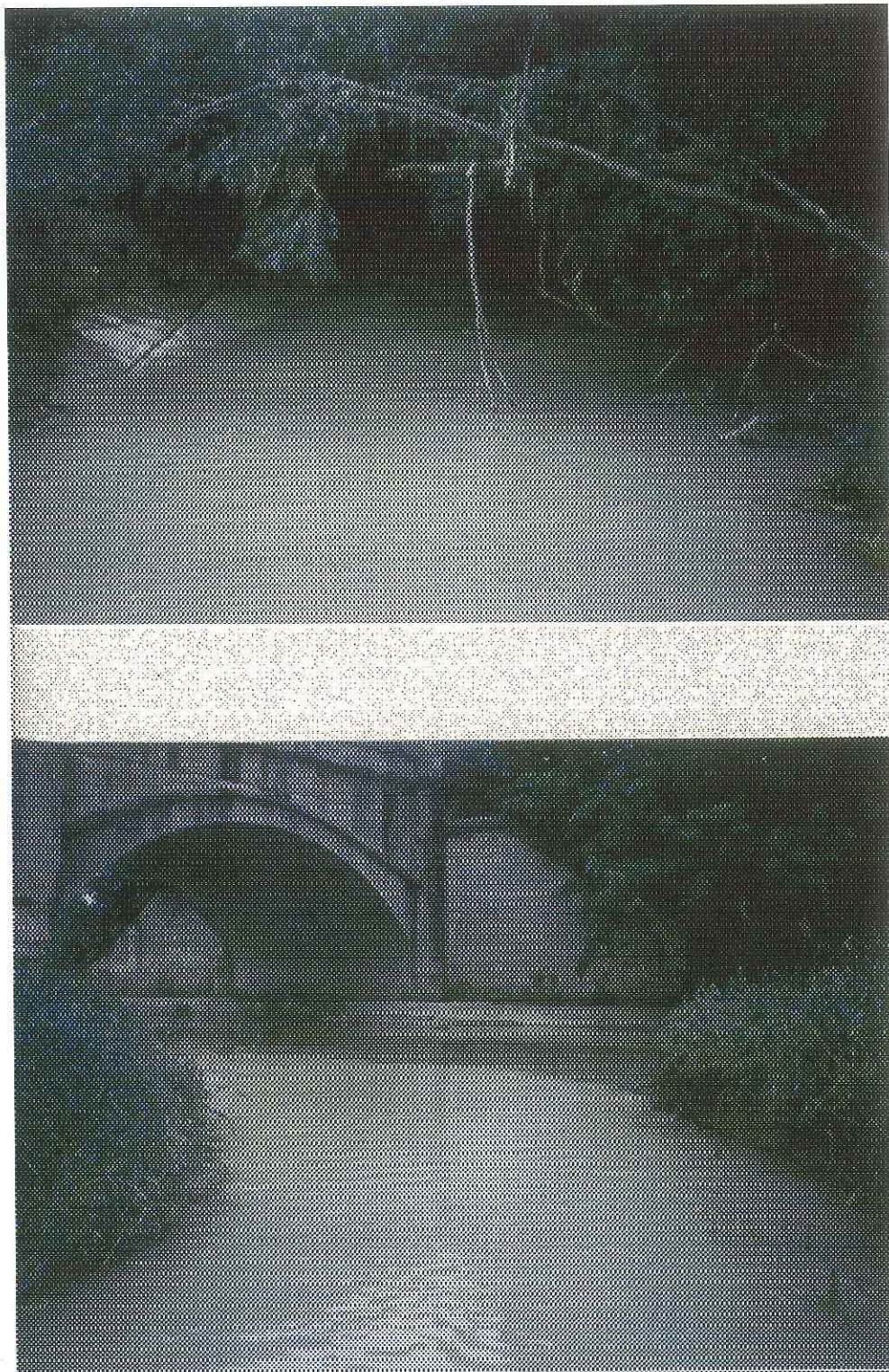




AK5 044170







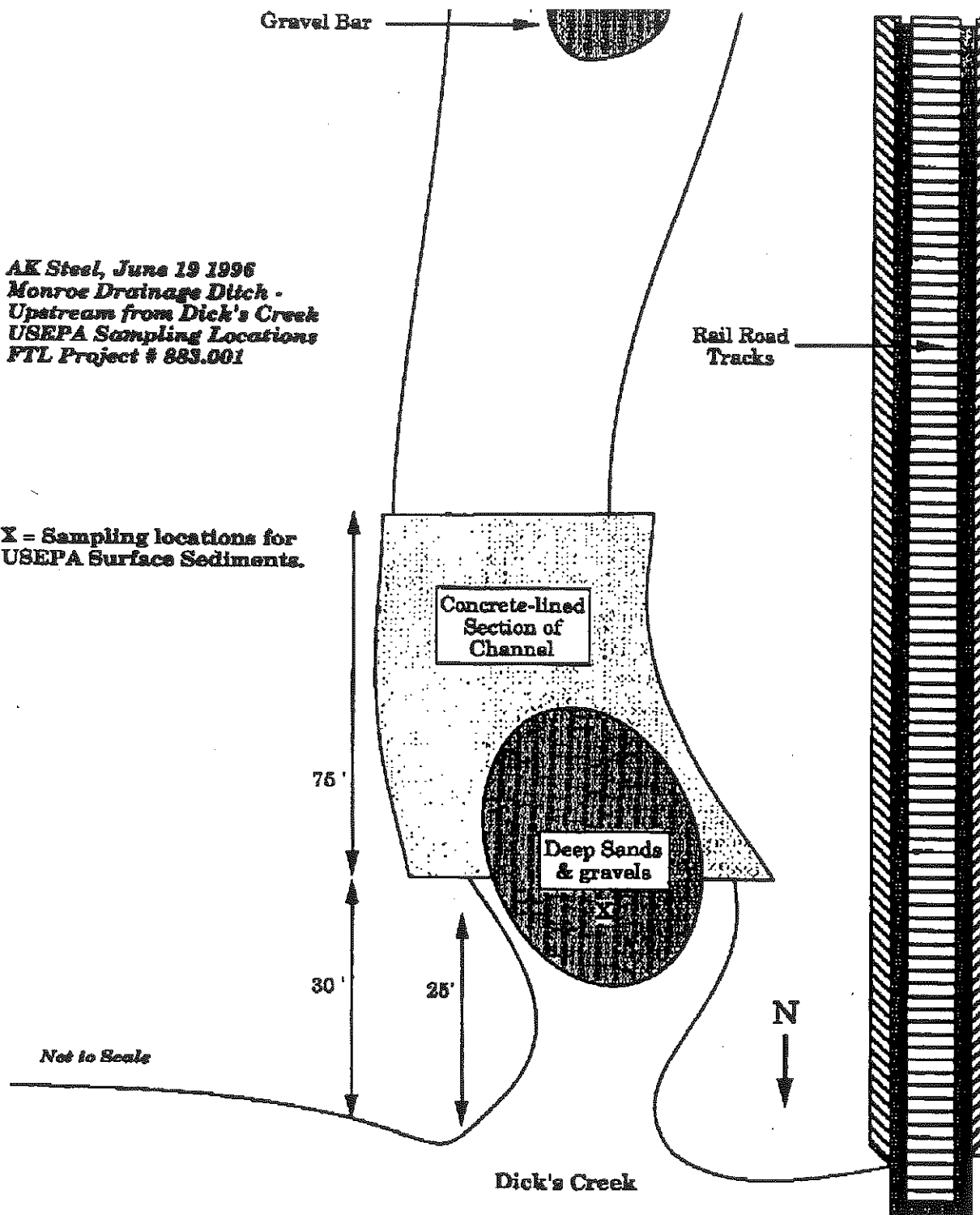
AK5 044171





**AK Steel, June 19 1996  
Monroe Drainage Ditch -  
Upstream from Dick's Creek  
USEPA Sampling Locations  
FTL Project # 883.001**

**X = Sampling locations for  
USEPA Surface Sediments.**



AK5 044172



Mr. Pat Gallo  
AK STEEL CORPORATION  
1801 Crawford Street  
Middletown, OH 45043

Page 1  
Report Date : 06/24/96  
HEG Task # : 96060183  
HEG P/N, Acct:

=====

P.O. Number: 2886643  
Proj Name: Various USEPA Sample Points

=====

Date Received: 06/20/96

HEG Sample # : 9605143 Sample Date: 06/19/96 Sample Priority: Rush  
Sample ID : USEPA Sample of Monroe Drainage Ditch

Parameter	Units	Results	Comments
=====			
PCB			02
Aroclor 1016	mg/kg	< 0.19	
Aroclor 1221	mg/kg	< 0.19	
Aroclor 1232	mg/kg	< 0.19	
Aroclor 1242	mg/kg	< 0.19	
Aroclor 1248	mg/kg	< 0.19	
Aroclor 1254	mg/kg	< 0.19	
Aroclor 1260	mg/kg	< 0.19	
Total	mg/kg	< 0.19	

02 sample matrix interferences

AK5

AK5 044173



-----  
HEG Lab Task # 96060183  
HEG Client: AK STEEL CORPORATION

Date Received : 06/20/96 Date Reported: 06/24/96  
-----

Sample #: 9605143 Sample Date: 06/19/96  
Sample ID: USEPA Sample Of Monroe Drainage Ditch  
-----

Analysis Date	Analyst	Test Performed	Hold Time (Days)
06/21/96	ch	PCB Extraction(Solid)	14
06/21/96	ksw	PCBiphenyls-Solid, Sonication Extrac.	40

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AK5 044174





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

**MEMORANDUM**

**DATE:** June 5, 2000

**SUBJECT:** Technical Direction Regarding: AK Steel, Middletown, OH  
EPA Contract #: 68-W-99-018  
Work Assignment #: R05805 (Technical Document Review)

**FROM:** Michael Mikulka and Lisa Geist  
Technical Advisor Technical Contact/Project Manager

**THRU:** Allen Wojtas, Work Assignment Manager

**TO:** Ed Schussler, Regional Manager  
TetraTech

This Technical Direction Memorandum (TDM) is to clarify the scope of work for the Tasks 1, 2 or 3 of the Work Assignment identified above, namely to provide expert support to the U.S. EPA technical advisor for document review and potential case development. This technical direction will not alter the LOE/COST of the project, nor change the period of performance.

**BACKGROUND:**

The AK Steel facility is an integrated steel processing facility located within the City of Middletown, Ohio. Dick's Creek passes through the facility along its southern boundary, but north of its (past and) present slag and other steel processing residuals processing area. More recently, AK Steel was cited by the State for illegal discharges of waste materials containing, among other constituents, PCBs in measurable quantities. AK Steel has ceased the discharges. Past and current sampling done by AK Steel, the Ohio EPA, Wright State University, and USEPA, has shown that Dick's Creek and the landfill tributary which runs from south to north through the slag processing area, are contaminated with PCBs and PAHs. USEPA has or will shortly order AK Steel to develop and implement a remedial plan to remove or otherwise abate the potential imminent and substantial endangerment associated with the releases.

The purpose of this TDM is to request assistance for Region 5, through document review and technical support, in evaluating both existing human health and ecological risk levels associated with existing contamination within Dick's Creek and tributaries in Middletown, Ohio, associated with past and current solid waste management practices

AK5 040885

at the AK Steel facility in Middletown, OH, and in providing technical support to USEPA in evaluating AK Steel's responses to the Order. This will include a more rigorous analysis than currently completed by USEPA as to whether the actions proposed by AK Steel will be sufficient to abate the ecological and human health risks presented by the contaminants currently in the environment.

## **II. ENFORCEMENT NEEDS AND REGULATORY ACTION BEING SUPPORTED**

The information from this evaluation will support enforcement litigation against AK Steel related to its operations in Middletown, OH. The purpose of the activity is to document the existing ecological and human health risks, and to confirm that any planned remedial measures are technically adequate and sufficient to abate the existing risks posed by leaving the contaminants released in the environment.

## **III. SPECIFIC TASKS TO BE PERFORMED BY THE CONTRACTOR & SCHEDULE FOR COMPLETION**

1. Review documents to be provided by USEPA or developed by Wright State University. Documents to be reviewed include the following:
  - A. USEPA Order to AK Steel
  - B. Ohio EPA sampling data from 1995, 1997 and 1999 sampling events
  - C. AK Steel sampling data from 1996 and 1999 sampling events
  - D. USEPA sampling data from 1999 sampling event
  - E. Wright State University data from sampling events conducted after 1995
  - F. USEPA determination of existing baseline risk, based on B, C and D, above.
2. Integrate the Wright State information into the other environmental data, and update the ecological and human health risks using the complete data set, within 60 calendar days of receipt of information.
3. Upon receipt of AK Steel's proposed sampling plan and QAPP, provide comments to USEPA within 14 calendar days as to whether the plan will provide sufficient additional information needed to assess if risks to human health and the environment will be adequately characterized.
4. Upon receipt of AK Steel's sampling results and proposed remedial plan, provide comments to USEPA as to whether the plan will abate existing risks to human health



and the environment, and provide a calculation of risk abatement provided by the plan, within 14 calendar days of its receipt.

5. Consult with the WAM, and Technical Contacts as necessary during the conduct of the work to clarify technical requirements.

#### **IV. COMPLETION DATE**

The Order issued to AK Steel provides tight time frames for submission and review of information. Review and comments to USEPA will be necessary consistent with these time frames.

#### **TRAVEL REQUIREMENTS**

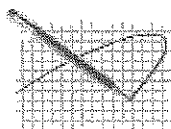
Travel will be required to the state offices in Columbus, OH or Dayton, Ohio, for up to 2, 1 day meetings for 2 persons related to the project. In addition, a trip to the facility in Middletown, Ohio for 1-2 persons for up to 2 additional days to complete a visual inspection of the location, and to meet with staff from OEPA and/or Wright State University will be required. It is currently anticipated that USEPA staff will accompany contractor staff to the site, so that contractor staff will not need appropriate letters of introduction for site access.

#### **TECHNICAL DIRECTION**

The Technical Contact/Project Manager for the site is Lisa Geist, who can be reached at 312-886-0878. Her address is U.S. EPA, Enforcement and Compliance Assurance Branch, Waste, Pesticides and Toxics Division (DE-9J), 77 W. Jackson Blvd., Chicago IL 60604. Facsimile (FAX) number is (312) 353-4342. Additional technical support and clarification may be sought from Michael Mikulka who can be reached at (312) 886-6760.

AK5 040887





**Bernie Orenstein**

06/01/00 12:31 PM

To: Lisa Geist/R5/USEPA/US@EPA  
cc: Fred Norling/R5/USEPA/US@EPA, Allen  
Wojtas/R5/USEPA/US@EPA, Michael  
Mikulka/R5/USEPA/US@EPA

Subject: Re: AK Steel

We don't have a specific work assignment (WA) under Tetra Tech (TT) for risk assessments, only TL, but I think the WA for document review, with Allen Wojtas, under TT, (like Tom Manning's under TL) could support this work. Let me know what you think, Allen. Also, although we can't ask TT to connect with Prof. Burton, you can write the TDM, thru Allen, to require someone with his knowledge of the site, etc. and TT will try to fill that request.. they might ask you if you know of someone like that. Do you need an example of a TDM? let me know if you need any help..

Bernie

Lisa Geist 06/01/2000 10:10 AM

**Lisa Geist** 06/01/2000 10:10 AM

To: Bernie Orenstein

Bernie -

I'm only in the office for the rest of today, so if we need to talk more about this is person, let me know. Otherwise, next week I can be reached in Colorado while at an Ecological Risk Assessors meeting. Just leave me a voice mail message.

I definitely think we'll want outside help on this project. A professor, Alan Burton, at Wright State University in Dayton, is already familiar with the Creek affected by AK Steel. If possible, we would like him to look at the data for the sediments and provide us with a written opinion on the potential threats to the environment. In addition, he may have independent research data regarding the problems in the Creek which could support his opinion. Then, if necessary, we would want him to testify as to his opinions in court.

These efforts may better fit into one or both of the risk assessment work assignments?  
Specifically, the part in the EcoRisk work assignment purpose about  
(c) performing risk assessments or hazard/risk evaluations to support Agency needs for  
RFIs, Interim Measures, or Enforcement Orders;

and correspondingly Task 5

(5) Conduct ecological risk assessment or hazard/risk evaluation activities for 1-3 facilities to support Agency needs for Corrective Action.

However, I know that my work assignment is with TechLaw, right? Is there a similar one with Tetra Tech for risk assessment support? Also, since it is both human health and the environment which may be at risk, how can we include potential human health risks in any evaluations? I'm not as familiar with the purpose and tasks of the document review work assignment, but if it fits there, too, that's fine with me. Anyhow, I can start drafting a scope of work for you. Mike Mikulka will be around all next week to help finalize this. He's been working closely with me on this project.

Thanks!

**AK5 044154**



Lisa

AK5 044155





**Lisa Geist**

06/01/00 03:10 PM

To: Michael Mikulka/R5/USEPA/US@EPA  
cc:  
Subject: ak steel sow

Mike -

I don't think I'm going to get to drafting a sow for AK Steel today related to obtaining an expert witness/opinion on the potential threats associated with the sediments of Dick's Creek. Allen probably has an example one you can use. Sorry.

Lisa

**AK5 044156**







**Lisa Geist**

06/01/00 03:15 PM

To: Robert Guenther/R5/USEPA/US@EPA, Michael  
Mikulka/R5/USEPA/US@EPA, RDarnell@enrd.usdoj.gov  
cc:  
Subject: AK Steel

Robert et al.,

If anyone needs to reach me after today, please leave me a message on my voice mail (312) 886-0878 and I will call you back. I will not have non-responsive to email per se next week, but will check my phone messages and will have a laptop to work on any documents. Thanks!

Lisa

**AK5 044157**





**Lisa Geist**

06/01/00 03:44 PM

To: Michael Mikulka/R5/USEPA/US@EPA  
cc: Bernie Orenstein/R5/USEPA/US@EPA, Margaret  
McCue/R5/USEPA/US@EPA  
Subject: PR for AK Steel -Reply

FYI - please help, I'm leaving now....

Lisa

----- Forwarded by Lisa Geist/R5/USEPA/US on 06/01/2000 03:44 PM -----



Michael Calhoun@EPA on 06/01/2000 03:28:16 PM

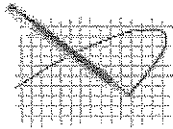
To: Bernie Orenstein cc: Lisa Geist, Rosemarie Kelley, Margaret McCue

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PR is OK and ready to go, but I must  
have scope of work describing what is  
to be done. LAN or Fax (202-564-9001)  
to me ASAP. Our Acting OD/ORE will not  
sign/approve unless I have it!!

AK5 044158





**Bernie Orenstein**

06/01/00 03:49 PM

To: Lisa Geist/R5/USEPA/US@EPA  
cc: Michael Mikulka/R5/USEPA/US@EPA, Margaret  
McCue/R5/USEPA/US@EPA, Calhoun.Michael@EPA.GOV, Allen  
Wojtas/R5/USEPA/US@EPA  
Subject: Re: PR for AK Steel -Reply

If Mike Mikulka can finalize the TDM (like a mini-statement of work) by early next week, Allen Wojtas and I can review and help finalize and send it to Mike Calhoun so the PR can be processed. Does that work for everyone?

Lisa Geist 06/01/2000 03:44 PM

**Lisa Geist** 06/01/2000 03:44 PM

To: Michael Mikulka cc: Bernie Orenstein, Margaret McCue

FYI - please help, I'm leaving now....

Lisa

----- Forwarded by Lisa Geist/R5/USEPA/US on 06/01/2000 03:44 PM -----



Michael Calhoun@EPA on 06/01/2000 03:28:16 PM

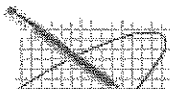
To: Bernie Orenstein cc: Lisa Geist, Rosemarie Kelley, Margaret McCue

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PR is OK and ready to go, but I must have scope of work describing what is to be done. LAN or Fax (202-564-9001) to me ASAP. Our Acting OD/ORE will not sign/approve unless I have it!!

**AK5 044159**





**Bernie Orenstein**

06/01/00 04:10 PM

To: Michael Mikulka/R5/USEPA/US@EPA  
cc: Lisa Geist/R5/USEPA/US@EPA  
Subject: Re: PR for AK Steel -Reply

Mike: sorry you weren't part of some earlier e-mails... TT is doing something similar at an AK Steel site in Region 3, with HQ funding, and they've told me that they have capability in this area and can access add'l support, as required, to help us with this... Fred and I agree that the document review work assignment, under TT, can get the work done. let me know when you need some help getting the TDM to HQ so we can get the PR processed. Bernie  
Michael Mikulka



Michael Mikulka  
06/01/2000 04:02 PM

To: Bernie Orenstein

Bernie -- as p[er] Lisa's last message to you, if techLaw has the proper services in thrie SOW, why are we putting the \$ into tetraTech? Also, since we really want Allen Burton from Wright State University, which contractor will sub the work out to him?

Let's talk, then I will do the SOW. Probably Monday I will get you a draft.

Mike

**AK5 044160**








Lisa Geist

04/13/00 05:53 PM

To: RDarnell@enrd.usdoj.gov, Robert Guenther/R5/USEPA/US@EPA  
cc: Michael Mikulka/R5/USEPA/US@EPA  
Subject: RE: AK Steel 

Everyone,

I talked to Mark Osika today about the sediment sampling that's been done out at AK Steel. The only split samples that have been collected there were in 1996 (US EPA and AK Steel during the multimedia inspection), and June, 1999 (US EPA, AK Steel, and OEPA). The 1999 results are compared in the text of the referral. I was not previously aware of the 1996 U.S EPA results, but they have been requested by Mike. I don't know off hand what AK Steel's results were for that 1996 sampling. The 1999 US EPA sampling results have also been requested, but will probably not be available for some time yet. (Mike - please clarify if I'm wrong...)

In general, samples collected at different times, and especially during different years are not comparable, due to the dynamic nature of waterbodies, and the potential for constant sediment movement and resuspension. In addition, AK Steel may be missing hotspots of PCBs by not properly locating their sampling, and certainly by not sampling using sediment cores to obtain deeper samples. Depositional areas of the Creek must be sampled, especially downstream of the confluence of the Landfill Tributary, to determine where the PCBs are going. Any core samples should be divided into discrete segments, either by visual examination of the materials, or pre-defined depth intervals. Furthermore, it is nearly impossible to determine why 2 different labs (or even 3) obtain different results for so-called similar samples. Lab methods may be different, or the samples may contain small pockets of contamination, or different amounts of fine grained particle versus larger sized gravels. The sampling protocols matter more than the analyses, too. That is, how and where the samples are collected in the field, as opposed to what tests are run by the laboratory. It seems a bit pointless to argue with AK Steel about that data, when OEPA has been doing this for years with them.

It may be useful to have our RCRA contractors go out and collect additional sediment samples asap. We can request quick turn around on the samples and get results within a week, I would think. This effort wouldn't have to hold up drafting or even issuing an order, but could be useful in the future...

Also, we may want to include the more detailed sampling plan elements from OEPA draft consent order (Jan 1998) in whatever 7003 order we issue to AK. That document is in the appendices to the referral, and I used it as basis for the relief requested in the referral.

OK, that's all from me for now. See you on monday.

Lisa

AK5 044100





*United States Environmental  
Protection Agency  
Region 5*

RELEASED  
DATE 12/4/18  
RIN # 2018-00469  
INITIALS EPW

May 22, 2000 **REVISED FINAL DRAFT**

DE-9J

**MEMORANDUM: FOIA EXEMPT/ATTORNEY-CLIENT PRIVILEGE;**

Prepared in Anticipation of Litigation

**SUBJECT:** Field Survey of Dick's Creek and Landfill Tributary  
Adjacent to AK Steel, Middletown, Ohio  
EPA ID No.: OHD 004 234 480

**FROM:** Michael J. Mikulka  
Environmental Engineer

**AND:** Lisa Geist, Ecologist

**TO:** Robert Guenther  
Assistant Regional Counsel

On May 11, 2000, a field survey of Dick's Creek and the Landfill Tributary adjacent to AK Steel's slag processing area was made by staff from the Waste, Pesticides and Toxics Division, Enforcement and Compliance Assurance Branch. Lisa Geist and Mike Mikulka represented U.S. EPA during the field survey. We were accompanied during the field survey by two staff from Ohio EPA's Southwest District Office: Diana Zimmerman and Greg Buthker, both from the Division of Surface Water (DSW). During our survey of the landfill tributary, we met briefly with Carl Batliner, AK Steel.

The intended purpose of the visit was to observe current conditions of Dick's Creek and the landfill tributary and to identify possible future sampling locations of the 2 water bodies for remedial planning and design purposes. Field notes were taken by Mike Mikulka, and all photographs were taken by Lisa Geist. A copy of the photos taken are attached. See Exhibit 2.

AK5 044122

## **Interview with Mark Bamberger, MCD**

Upon arrival at the Dick's Creek at the junction with Yankee Road, we were met by Mark Bamberger of Miami Conservancy District (MCD). Mr. Bamberger explained that MCD is interested in whatever activities we conduct on Dick's Creek, since it owns the adjacent land. He provided us with a copy of a land ownership map which had info regarding what lands were owned by MCD. See Figure 2.

## **Field Survey**

We launched 2 canoes from the area on the south bank of Dick's Creek, just east of Yankee Road, at about 9:30 am, and began to canoe upstream towards AK Steel outfall 002. At various locations, we stopped and either took or attempted to take a core sample of the sediments at that location. The samples were taken using a 2 inch plastic tube, in order to observe if the sediments were visibly contaminated, and whether or not that location was likely to contain PCBs. The cores were taken by pushing the tube into the sediment by hand, sealing the top of the tube, and pulling the tube out. The sediments remained within the tube, and were removed by taking off the top, and gently tapping the side of the tube. Any observations regarding the specific sample were then recorded, the sample was photographed, if possible, and the sample was returned to the water at that location. Sometimes photos were not taken due to impracticality of trying to hold the boat steady and photograph the material simultaneously. The approximate locations where we stopped to pull samples and observe the sediment quality are identified on the attached USGS map of the area. See Exhibit 2. We attempted to record the locations using a portable global positioning system unit, but the unit failed at the first location, so it was not utilized.

### **Location #1 - Dick's Creek**

This location was about 1/3 of the distance between Yankee Road and the upstream railroad (RR) bridge. The area was at the south edge of Dick's Creek, at a point where surface drainage from the south bank appears to drain into the Creek. This is about river mile 2.6, and the water depth was about 1 foot. A core was pulled, and the substrate was a black/brown sand, with organic material and a petroleum-type odor. See photographs 1-1 and 1-2.

### **Location #2 - Dick's Creek**

This location was between Yankee Road and the upstream railroad (RR) bridge, about 100 feet west of the bridge. The area was at the south edge of Dick's Creek. The water depth at this point was about 2 feet. A core was pulled, and the substrate was a black muck below a thin vegetative cover, which contained less sand than the previous location. It had a petroleum-type odor. See

AK5 044123

photograph 1-3.

### **Location #3 - Dick's Creek**

This location was upstream of the RR bridge, at the mouth of the landfill tributary. We stopped here to try to meet Carl Batliner, of AK Steel, but after 15 minutes, we continued upstream. No cores were pulled or photos taken at this time.

### **Location #4 - Dick's Creek**

This location was upstream of the RR bridge, about 100 feet upstream of the landfill tributary. We pulled a core from this location, where the water depth was less than 1 foot. The core was about 6 inches, with some black material at about 3-4 inch depth, with a slight petroleum odor. See photo 1-4 of the core. Photo 1-5 is a view from this location west towards the RR bridge.

### **Location #5 - Dick's Creek**

This location was upstream of the RR bridge, about 150 feet upstream of the landfill tributary. This is about river mile 2.7. We were directly across from the SE corner of a metal fence on the north side of the river. We pulled about a 2 inch sample from the area near the south bank. It was sand with a black color and a petroleum odor. See photo 1-6 for a view of some black material observed on the south bank, and photo 1-7 for a view of the sample from the south bank area.

### **Location #6 - Dick's Creek**

This location is just upstream of where Dick's Creek bends to the south. The water depth at this location was less than 6 inches. We took a sediment sample from the center of the stream. It was about a 6 inch core. The top 3 inches were a coarse sand and gravel. The bottom 3 inches were a coarse sand and gravel with a black discoloration with a petroleum odor. See photo 1-8. Photo 1-9 shows a view looking downstream from this location.

### **Location #7 - Dick's Creek**

This location is upstream of location 6 by about 200 feet. We were directly across from a large white tree on the south bank. We took a sample from the north bank area. It contained a black fine sand which had a petroleum odor. Photo 1-10 shows the material from this location on a paddle.

### **Location #8 - Dick's Creek**

This location is upstream of location 7 by about 250 feet. We were directly across from a bus on the north bank which said Oak Ridge Baptist Church. The sample from this location was coarse sand and gravel, with a black discoloration at 4 inch depth. It had a petroleum odor. No photo was taken. At this point, we could not continue much further upstream without dragging the canoes, so we turned around and went back downstream.

### **Location #3 - Dick's Creek**

This location was upstream of the RR bridge, at the mouth of the landfill tributary. A 7 inch core was taken at this location. The top 1 inch was sand, with from 1 to 3 inches a sand with a black discoloration with a petroleum odor, and from 4 to 7 inches the material was a grey clay with a petroleum odor. Photo 1-11 shows the sample, and photo 1-12 shows a view of the landfill tributary looking upstream.

### **Locations #3A and #3B - Landfill Tributary to Dick's Creek**

We walked up the landfill tributary about 15 feet, and took a core from the right (looking downstream) bank. It contained sand and gravel with a black color and a petroleum odor. See photo 1-13. When the core was removed, an oil sheen spread in the water.

We took another core from the left bank (location #3B). The core was of black material in the landfill tributary embedded in the left bank. See photo 1-14. Photo 1-15 shows a view upstream of the landfill tributary, where the concrete channel can be seen.

### **Location #9 - Landfill Tributary to Dick's Creek**

This location is about 100 feet upstream of the mouth of the landfill tributary, at the upstream end of the concrete channel. The core taken was sand and gravel, with a slight petroleum odor. See photo 1-16.

### **Location #10 - Landfill Tributary to Dick's Creek**

This location is about 170 feet upstream of the mouth of the landfill tributary. A 3-4 inch core was taken from the center of the tributary. It contained coarse brown sand with a petroleum odor. Photo 1-17 shows the right bank of the landfill tributary, where the soil appeared to be discolored (photo shows underlying layer of darker, discolored materials). Photo 1-18 shows a view upstream in the tributary at this point.

### **Location #11 - Landfill Tributary to Dick's Creek**



It was about 11:30 am. We were just upstream of where the tributary bends to the east. Water was observed to be seeping in to the tributary from the left (southwest) bank. Photo 2-1 shows the seepage. Photo 2-2 shows where rock has been dumped to cover the seepage. This appears to be a new seep which has not been sampled or identified previously. A number of cores were pulled and all were black at the surface. A core was pulled from the right bank, and contained 1 inch of sand and gravel with a petroleum odor. No photo was taken.

#### **Location #12 - Landfill Tributary to Dick's Creek**

This location is at the downstream end of a culvert over which is a crossing of the landfill tributary, and allows vehicular access to the landfill on the opposite side of the tributary. There is a pool at the downstream end of this culvert, where settling may occur. Photo 2-3 shows the culvert and pool at this location. Also at this location, on the left bank, a white/grey area was noted, which could indicate another possible point of seepage. See photo 2-4. Photo 2-5 shows the same point on the left bank from the top.

#### **Location #13 - Landfill Tributary to Dick's Creek**

This location is in the tributary just before it bends to the south again. A sample was taken from the center of the channel, and was about 5 inches long. The bottom 3 inches were organic in nature, with a petroleum odor. The top 2 inches were sand and gravel. Photo 2-6 shows the sample, and photo 2-7 shows the view upstream at this location.

#### **Location #14 - Landfill Tributary to Dick's Creek**

This location is in the tributary after it bends to the south. There was an iron pipe driven into the tributary here, and pipe had created a flow blockage by trapping branches around the pipe. A 5 inch sample was taken from the center of the channel, downstream of the pipe. An oil sheen formed when the sample was pulled. The material was coarse sand colored black with a petroleum odor. The width of flow at this point was 4 feet, with a depth of flow ranging from 1 to 8 inches. Photo 2-8 shows the sample.

#### **Location #15 - Landfill Tributary to Dick's Creek**

This location was in the tributary just below the treatment system, which was up on the bank of the slag processing area. This area is being actively managed with residuals processing. A sample was pulled, which was all black sand with oil visible, and a petroleum odor. It was 12:15 pm, and we met briefly here with Carl

Batliner of AK Steel, at the treatment system. At 12:20 pm, we left to return to the mouth of the tributary.

Photos 2-9 and 2-10 show the right (east) bank of the tributary just below the treatment system. Visible oil sheens developed when the area was disturbed, and a dark black oily material was present just under or at the surface of the sediment/river bank. The area emitted strong petroleum or PAH odors.

#### **Location #16 - Dick's Creek at Yankee Road**

We canoed downstream to Yankee Road, but were not able to pull a sample at this point due to the coarser nature of the material, due in part to the flow restriction at the bridge, which increases the velocity, and the inability to hold the boat steady.

#### **Location #17 - Dick's Creek at USGS Gaging Station**

There is a USGS gaging station about 120 feet downstream of Yankee Road. We were near the right (north) bank, and pulled a core from just downstream of the gaging station, and just upstream of an outfall in the right bank. The material was a black fine sand with a petroleum odor. No photos was taken of the sample. Photo 2-11 shows the location of the USGS station, although it is difficult to see it in the photograph. In addition, we observed remnant fishing line/gear caught in the trees at this location.

#### **Location #18 - Dick's Creek Downstream of Yankee Road**

This location is downstream of Yankee Road by approximately 400 feet. The left (south) bank appeared to be covered with an oily material. Photo 2-12 shows the sample which appeared to be a clay with an oily black layer in the first 2 inches. Photo 2-13 shows a chair set on the right (north) bank, which could indicate a possible fishing location, as there was a deeper pool here.

#### **Location #19 - Dick's Creek**

This location is downstream of Yankee Road by approximately 800 feet. A second, deeper pool area was observed and appeared to be a possible swimming location, due to clothing left on the bank. See photo 3-1 for a view of the right (north) bank and an open, sandy area for accessing the river. We took a six inch core sample from the right bank, in about 4 feet of water. The material was a black oily sand with some pebbles, with a slight petroleum odor. See photo 3-2.

#### **Location #20 - Dick's Creek**



There was a sand bar on the left bank at this location. A core was pulled at this location, and it was coarse sand, with a black layer that began at about 3-4 inch depth. The material had a petroleum odor. No photo taken.

#### **Location #21 - Dick's Creek**

This location was just upstream of another unnamed tributary which flows in from the south. A 6 inch core of material was pulled, and it contained coarse sand specked with black material and had a slight petroleum odor. Photo 3-3 was taken and shows a view of the tributary.

#### **Location #22 - Dick's Creek**

This location was about 100 feet past the second unnamed tributary. As we were passing, a Mr. William Lewis was mowing in the property on the north bank. He stopped and came to the river bank to speak to us. He said he owned a piece of property along the right bank. As he comes down to the river often, he has seen fish here, and does see children fishing or playing in Dick's Creek. When he sees anyone fishing, he tells them not to eat the fish. He has seen plumes of wastes coming down the Creek on more than one occasion. When he sees them, he usually calls the police, and they send the fire department. They reportedly tell him it is from AK Steel, and nothing is done about it. He told us he worked at AK Steel and is now retired. He was a welder. At one point he was sent to repair the deep injection well. Acid had reportedly eroded through the pipe and the well was injecting the acid directly into the ground. When this was discovered, they were called to replace the upper portion of the well. Photo 3-4 is a photo of Mr. Lewis.

#### **Location #23 - Dick's Creek**

This location is downstream from the second unnamed tributary. We stopped near the right bank, upstream from Amanda School. The water depth was about 1 foot. A 2-3 inch core was pulled, and contained a black fine sand at the surface, with a petroleum odor. Photo 3-5 shows the sample.

#### **Location #24 - Dick's Creek**

This location is downstream from the second unnamed tributary, right at Amanda School. We stopped near the right bank, and pulled an 8-9 inch core, which was a black fine sand throughout, with a petroleum odor. Photos 3-6 and 3-7 show this sample.

At this point, we pulled the canoes out of the water, and ended the field survey. As we were moving the equipment from the boats, a group of children were heading in the direction of the Creek, for recess. They came out and began to

play at the edge of the grassy area. There is a wooded area of about 50 feet in width which separates this play area from Dick's Creek. There are no signs such as seen elsewhere along Dick's Creek warning that this is an unsafe area. We loaded the canoes and other equipment, and headed back to the OEPA SWDO in Dayton.

### **Conclusions/Recommendations**

The areas surveyed all appeared to be contaminated. None of the samples pulled showed any signs of benthic life. Oil and/or PAH contamination appears to be contributing to the problem. There appears to be no real need for further sampling in the landfill tributary to justify remediation, as all the material observed was visibly contaminated. The material should be removed, and confirmatory sampling to verify residual concentrations conducted. There is more than likely an area of PCB contamination at the mouth of the landfill tributary. Sampling should be used to delineate the extent of the PCB contamination in order to plan the remedial action. It is also likely that oils and PAHs are causing or contributing to existing human health, ecological and aquatic life risks in Dick's Creek, throughout the reach surveyed. Any future sampling should focus on PCBs as well as oils and PAHs, and these constituents as well as metals should be considered in defining remedial solutions.

Mr. Lewis should be interviewed formally with respect to his observations on Dick's Creek and the acid releases at AK Steel.

DRAFT

CONFIDENTIAL

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IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION

THE UNITED STATES OF AMERICA,

Plaintiff,

v.

AK STEEL CORPORATION,

Defendant.

CIVIL ACTION NO.

RELEASED  
DATE 8/17/2010  
RIN # 2010-004691  
INITIALS ply

6/23/00  
w/ comments  
provided to  
D Amell by  
Hym  
6/23/00

COMPLAINT

The United States of America, by authority of the Attorney General of the United States and through the undersigned attorneys, acting at the request of the Administrator of the United States Environmental Protection Agency ("U.S. EPA"), files this Complaint and alleges as follows:

NATURE OF THE ACTION

1. This is a civil action brought against AK Steel Company ("Defendant" or "AK Steel") for injunctive relief and/or the assessment of civil penalties for violations of the Clean Air Act ("CAA"), 42 U.S.C. § 7401 et seq., the Clean Water Act ("CWA"), 33 U.S.C. § 1311 et seq., the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq., regulations implementing those statutes, and the Ohio State Implementation Plan ("SIP"). The alleged violations occurred and are occurring at AK Steel's integrated steel production facility located at 1801 Crawford Street, Middletown, Butler County, Ohio ("the Facility").

CONFIDENTIAL

RELEASED  
DATE 1/1/80  
BY [illegible]  
INITIALS [illegible]

### JURISDICTION AND VENUE

2. This Court has jurisdiction over the subject matter of this civil action pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) and (d) of the CWA, 33 U.S.C. § 1319(b) and (d); Section 3008(h) of RCRA, 42 U.S.C. § 6928; and 28 U.S.C. §§ 1331, 1345, and 1355.

3. Venue is proper in this district pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) of the CWA, 33 U.S.C. § 1319(b); Section 3008(h) of RCRA, 42 U.S.C. § 6928; and 28 U.S.C. §§ 1391(b), (c), and 1395(a), because Defendant resides and conducts business in this district and because the violations occurred within this district.

### NOTICE

4. Pursuant to Section 113(a) of the CAA, 42 U.S.C. § 7413(a), U.S. EPA notified AK Steel and the State of Ohio of the violations of the Ohio SIP alleged in this Complaint more than 30 days prior to its filing.

5. Notice of the commencement of this action has been given to the Ohio Environmental Protection Agency ("OEPA") pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) of the CWA, 33 U.S.C. § 1319(b); and Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2).

→ WHO SENT LETTER?

### DEFENDANT

6. AK Steel is a corporation organized under the laws of the State of Delaware and is registered to conduct business in the State of Ohio. AK Steel produces flat-rolled steel at the Facility, primarily for sale to the automotive, appliance, construction, and manufacturing markets.

7. Prior to 1989, the Facility was owned by Armco, Inc. In 1989, Armco, Inc. transferred the Facility (and associated liabilities) to Armco Steel Company, L.P. In 1994, Armco Steel Company, L.P. transferred the Facility (and associated liabilities) to AK Steel Corporation.



8. Defendant is a "person" as defined in Section 302(e) of the CAA, 42 U.S.C. § 7602(e); Section 502(5) of the CWA, 33 U.S.C. § 1362(5); and Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

### **STATUTORY AND REGULATORY BACKGROUND**

#### **A. CLEAN AIR ACT**

9. The Clean Air Act is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the CAA, 42 U.S.C. § 7470(b)(1).

##### **1. Visible Emission Provisions of the Ohio SIP**

10. On May 27, 1994, the Administrator of the U.S. EPA approved Ohio Administrative Rule ("OAC") Rule 3745-17-07 as part of the federally enforceable SIP for the State of Ohio. 59 Fed. Reg. 27464. OAC Rule 3745-17-07 superseded Ohio Pollution Control Board Rule AP-3-07 and regulates visible emissions from stationary sources.

11. OAC Rule 3745-17-07(B)(3) provides that visible particulate matter emissions of fugitive dust from, among other things, blast furnace casthouses shall not exceed twenty percent opacity as a six-minute average.

12. On March 31, 1981, the Administrator of the U.S. EPA conditionally approved portions of Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for the primary total suspended particulate nonattainment area of Middletown, Ohio. 46 Fed. Reg. 19468. At the time of this approval, Ohio had submitted OAC Rule 3745-17-01 through 11 for approval. The March 31, 1981, Federal Register notice only approved Part 08 as it applied to Armco, Inc., now AK Steel.

13. On May 27, 1994, the Administrator of the U.S. EPA approved portions of the Ohio SIP revisions for particulate matter regulations. This approval included the remaining portions of OAC 3745-17-08. 59 Fed. Reg. 27464.





14. OAC Rule 3745-17-08(B) provides that "no person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported, or stored; or a building or its appurtenances or a road to be used, constructed, altered, repaired, or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne." Such reasonably available control measures shall include, *inter alia*, the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. OAC Rule 3745-17-08(B)(3).

15. OAC Rule 3745-17-08(C) provides that "[f]or purposes of determining compliance with the requirements of paragraph (B) of this rule, the Director shall consider a control measure to be adequate if it complies with the following: (1) the visible particulate emission limitation(s) contained in Rule 3745-17-07 of the Administrative Code; and (2) if applicable, the control requirements contained in paragraph (B)(3) of this rule."

16. OAC Rule 3745-17-08(A)(2) provides that "notwithstanding the exemptions in paragraph (A)(3) of this rule [which includes exemptions for AK Steel], the requirements of paragraph (B) of this rule shall apply to any fugitive dust source regardless of location if, in the Director's judgment, probable cause exists to believe that such source is causing or contributing to a violation of rule 3745-15-07 or 3745-17-02 of the Administrative Code."

17. 40 C.F.R. § 52.23 provides, *inter alia*, that failure to comply with any approved regulatory provision of a SIP renders the person or governmental entity so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the CAA.

## **2. Particulate Matter Provisions of the Ohio SIP**

18. Section 109(a) of the CAA, 42 U.S.C. § 7409(a), requires U.S. EPA to publish and maintain National Ambient Air Quality Standards ("NAAQS") for certain air pollutants. The NAAQS promulgated by U.S. EPA pursuant to this provision are set forth in 40 C.F.R. Part 50.

19. Particulate Matter ("PM") is an "air pollutant" within the meaning of Sections 108



and 302 of the CAA, 42 U.S.C. §§ 7408 and 7602.

20. Pursuant to Section 109(a) and (b) of the CAA, U.S. EPA has promulgated regulations establishing NAAQS for PM, which are codified at 40 C.F.R. §§ 50.6 and 50.7.

21. Section 110 of the CAA, 42 U.S.C. § 7410, requires each State to adopt and submit to U.S. EPA for approval a SIP that provides for the implementation, maintenance and enforcement of NAAQS established under Section 109 of the CAA within the State.

22. Pursuant to Section 110 of the CAA, 42 U.S.C. § 7410, the State of Ohio has adopted and submitted to U.S. EPA various regulations that have been approved by U.S. EPA and which, taken together, constitute the SIP for the State of Ohio. *See* 40 C.F.R. Part 52, Subpart KK.

23. On May 27, 1994, the Administrator of the U.S. EPA approved OAC Rule 3745-17-11 as part of the SIP for the State of Ohio. 59 Fed. Reg 27464. OAC Rule 3745-17-11 states in relevant part that "any owner or operator of a source of particulate emissions" located within Butler County "shall operate said source so that the particulate emissions do not exceed the allowable emission rate specified by 'Curve P-1' of 'Figure II' or by 'Table I,' whichever is applicable under paragraph (A)(2) of this rule. . . ." Paragraph (A)(2) of OAC Rule 3745-17-11 states that except as otherwise indicated, the more stringent of Curve P-1 of Figure II, or Table I, shall apply. The allowable emission rate specified by Curve P-1 of Figure II presents the more stringent requirement in this case. For AK Steel's sinter plant, the maximum allowable mass rate of PM emissions from Curve P-1 of Figure II is 50 pounds per hour.

24. 40 C.F.R. § 52.23 provides, *inter alia*, that failure to comply with any approved regulatory provision of a SIP renders the person or governmental entity so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the CAA.

### 3. The Benzene Coke NESHAP

25. Section 108(a) of the CAA, 42 U.S.C. § 7408(a), requires U.S. EPA to establish a



list of pollutants which cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare and which are emitted from various mobile or stationary sources.

26. Section 112 of the CAA, 42 U.S.C. § 7412, requires U.S. EPA to promulgate emission standards for hazardous air pollutants. The standards are referred to as National Emission Standards for Hazardous Air Pollutants ("NESHAP"). Violations of requirements contained in a NESHAP are violations of the CAA.

27. Pursuant to Section 112(d) and (h) of the CAA, 42 U.S.C. § 7412(d) and (h), U.S. EPA promulgated National Emission Standards for Emissions from Coke By-Product Recovery Plants (the "benzene coke NESHAP"). The benzene coke NESHAP is set forth at 40 C.F.R. Part 61, Subpart L. The benzene coke NESHAP includes standards for the detection and repair of leaks of benzene from critical points in the by-product recovery process associated with coke ovens.

28. 40 C.F.R. § 61.132(a) requires each owner or operator of a furnace or foundry coke by-product recovery plant to: 1) enclose and seal all openings on each process vessel, tar storage tank, and tar-intercepting sump; and 2) install a control system to capture and prevent detectable emissions of benzene from these sources.

29. 40 C.F.R. § 61.132(b) requires, *inter alia*, each owner or operator of a furnace or a foundry coke by-product recovery plant on a semiannual basis to monitor, using Reference Method 21 and the procedures specified in 40 C.F.R. § 61.245(c), the connections and seals on each control system installed to meet the requirements of 40 C.F.R. § 61.132(a) to determine if it is operating with no detectable emissions. A leak is detected if an instrument reading indicates an organic chemical concentration of more than 500 ppm above a background concentration, as measured by Reference Method 21. The owner or operator must make a first attempt at repair within five calendar days of detection and must repair the leak as soon as practicable, but not later than fifteen calendar days after detection.



30. 40 C.F.R. § 61.132(c) requires, *inter alia*, each owner or operator of a furnace or a foundry coke by-product recovery plant to conduct, on an annual basis, a maintenance inspection of the control system installed to meet the requirements of 40 C.F.R. § 61.132(a) for evidence of system abnormalities, such as blocked or plugged lines, sticking valves, plugged condensate traps, and other maintenance defects that could result in abnormal system operation. The owner or operator must make a first attempt at repair within five calendar days of detection and must repair the system abnormality within fifteen calendar days of detection.

31. 40 C.F.R. § 61.135(d) requires, *inter alia*, each owner or operator of a furnace or a foundry coke by-product recovery plant to monitor on a quarterly basis each exhaustor that is in benzene service by the methods specified in 40 C.F.R. § 61.245(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. The owner or operator must make a first attempt at repair within five calendar days of detection and must repair the leak as soon as practicable, but not later than fifteen calendar days after detection.

#### 4. Enforcement Provisions

32. Section 113(b) of the CAA, 42 U.S.C. § 7413(b), authorizes the United States to commence a civil action for injunctive relief and assessment of civil penalties whenever a person has violated or is in violation of any requirement or prohibition of the CAA or any applicable implementation plan. Such violations include: violations of the benzene coke NESHAP; violations of SIP particulate emission limits; and violations of SIP visible emission limits. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

#### B. CLEAN WATER ACT

33. The objective of the Clean Water Act is to restore and maintain the chemical,





physical, and biological integrity of the waters of the United States. 33 U.S.C. § 1251(a).

**1. Direct Discharges**

34. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant into navigable waters of the United States by any person except in compliance with, *inter alia*, a National Pollutant Discharge Elimination ("NPDES") permit issued by U.S. EPA or an authorized state pursuant to Section 402 of the CWA, 33 U.S.C. § 1342.

35. Section 402(a) of the CWA, 33 U.S.C. § 1342(a), provides that U.S. EPA or an authorized state, in issuing NPDES permits, shall prescribe conditions for such permits as the permitting authority determines are necessary to carry out the provisions of the CWA.

36. The State of Ohio is authorized by the Administrator of U.S. EPA, pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b), to administer the NPDES permit program for discharges into navigable waters within its jurisdiction. The OEPA exercises this authority on behalf of the State of Ohio.

**2. Discharges To POTW**

37. Section 307(b) of the CWA, 33 U.S.C. § 1317(b), requires the Administrator of U.S. EPA to establish pretreatment standards for existing and new sources that introduce pollutants into any publicly-owned "treatment works" ("POTW"), as defined in Section 212(2) of the CWA, 33 U.S.C. § 1292(2).

38. Section 307(d) of the CWA, 33 U.S.C. § 1317(d), prohibits the owner or operator of any source from operating the source in violation of any pretreatment standard after the effective date of such standard.

39. Pursuant to Section 307(b)(1) of the CWA, 33 U.S.C. § 1317(b)(1), the Administrator of U.S. EPA promulgated General Pretreatment Regulations for Existing and New Sources of Pollution. Such standards are codified at 40 C.F.R. Part 403.

40. The provisions of 40 C.F.R. Part 403 apply to each "Industrial User" introducing



pollutants into a POTW.

41. Pursuant to Section 307(b) of the CWA, 33 U.S.C. § 1317(b), and 40 C.F.R. §§ 403.5(c) and 403.8, each POTW with a total design flow greater than five million gallons of water per day and which receives pollutants from industrial users subject to pretreatment standards is required to establish its own pretreatment program and to establish specific limits ("local limits") to implement the prohibitions in 40 C.F.R. § 403.5(a)(1) and (b).

42. Under 40 C.F.R. § 403.5(d), a POTW's local limits established pursuant to 40 C.F.R. § 403.5(c) are deemed to be pretreatment standards for purposes of Section 307(d) of the CWA, 33 U.S.C. § 1317(d).

### **3. Enforcement Provisions**

43. Section 309(b) of the CWA, 33 U.S.C. § 1319(b), authorizes the Administrator of U.S. EPA to commence a civil action for appropriate relief, including a temporary or permanent injunction and civil penalties of up to \$25,000 per day for each violation of the CWA, including discharges of any pollutant without, or not in compliance with the terms and conditions of, an NPDES permit, or each day of violation of the pretreatment requirements of Section 307 of the CWA, 33 U.S.C. § 1317, occurring on or before January 30, 1997. Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, authorize the assessment of civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

## **C. RESOURCE CONSERVATION AND RECOVERY ACT**

### **1. Section 3008(h)**

44. RCRA and its amendments establish a comprehensive regulatory program for generators of hazardous waste and for the management of facilities that treat, store, or dispose of hazardous wastes. Pursuant to authority granted by RCRA, U.S. EPA has promulgated regulations applicable to such generators and hazardous waste management facilities, codified at 40 C.F.R. Parts 260-271.



45. RCRA and its implementing regulations provide for government regulation of hazardous waste management facilities primarily through a permitting process. Section 3005(a) of RCRA, 42 U.S.C. § 6925(a), requires each person owning or operating a hazardous waste treatment, storage or disposal facility to have a permit and prohibits the treatment, storage or disposal of hazardous waste except in accordance with a permit.

46. Section 3005(e)(1) of RCRA, 42 U.S.C. § 6925(e)(1), provides that a hazardous waste facility that was in existence on November 19, 1980 may obtain "interim status," and treatment, storage, or disposal of hazardous waste at the facility may continue until U.S. EPA takes final action with respect to the facility's permit application, as long as the facility satisfies specified conditions. These conditions include filing a timely notice under Section 3010 of RCRA, 42 U.S.C. § 6930, and filing an application for a hazardous waste permit.

47. Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), provides that whenever the U.S. EPA Administrator determines that there is or has been a release of hazardous waste into the environment from a facility subject to RCRA's interim status requirements, the Administrator may commence a civil action in district court to obtain appropriate relief, including a temporary or permanent injunction.

**FIRST CLAIM FOR RELIEF**  
**(CAA: Ohio SIP Visible Emissions Violations)**

48. Paragraphs 1 through 32 are realleged and incorporated herein by reference.

49. On June 20, 1997, the Director of the OEPA found that probable cause existed to believe that the blast furnace was causing or contributing to a violation of OAC Rule 3745-15-07.

50. The requirements of OAC Rule 3745-17-08(B) have applied to the blast furnace continuously from at least June 20, 1997, to the present.

51. The blast furnace is a fugitive dust source.

52. On multiple occasions on September 18, 1997, visible particulate matter



emissions of fugitive dust from the blast furnace through its casthouse exceeded twenty percent opacity as a six-minute average.

53. On multiple occasions on September 8, 1998, visible particulate matter emissions of fugitive dust from the blast furnace casthouse exceeded twenty percent opacity as a six-minute average.

54. On multiple occasions on October 26, 1998, visible particulate matter emissions of fugitive dust from the blast furnace casthouse exceeded twenty percent opacity as a six-minute average.

55. On multiple occasions on November 24, 1998, visible particulate matter emissions of fugitive dust from the blast furnace casthouse exceeded twenty percent opacity as a six-minute average.

56. From at least September 18, 1997, to the present, the control measures existing at the blast furnace have not complied with the visible particulate emission limitations of OAC Rule 3745-17-07.

57. From at least September 18, 1997, to the present, AK Steel has failed to install and use, among other things, hoods, fans, and other equipment to "adequately" enclose, contain, capture, vent, and control fugitive dust at the blast furnace within the meaning of OAC Rule 3745-17-08(B)(3).

58. From at least September 18, 1997, to the present, AK Steel has caused or permitted the blast furnace to be operated or the blast furnace or its appurtenances to be used without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne.

59. On diverse occasions from at least September 18, 1997, to the present, including, but not limited to, the dates of the observed exceedances identified in Paragraphs 52 through 55, AK Steel has violated OAC Rule 3745-17-07, OAC Rule 3745-17-08(B), and, pursuant to 40 C.F.R. § 52.23, the Ohio SIP and the CAA.





60. Unless restrained by an order of the Court, AK Steel will continue to violate OAC Rule 3745-17-07, OAC Rule 3745-17-08(B), the Ohio SIP, and the CAA.

61. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

### **SECOND CLAIM FOR RELIEF**

#### **(CAA: Ohio SIP Particulate Matter Violations)**

62. Paragraphs 1 through 32 are realleged and incorporated herein by reference.

63. At the Facility, AK Steel owns and operates a plant to sinter ("sinter plant") various materials for reuse in the Facility's blast furnace. The sinter plant emits dust, ash and other particulate matter through a windbox stack after the gas stream has passed through a cyclonic collection system and a high-energy wet scrubber.

64. The sinter plant is a "stationary source," as that term is defined at Section 302(z) of the CAA, 42 U.S.C. § 7602(z).

65. The sinter plant is a "source," as that term is defined at OAC Rules 3745-17-01(A) and 3745-15-01.

66. The sinter plant is an operation, process or activity which releases or may release particulate emissions into the ambient air.

67. OAC Rule 3745-17-11 is applicable to the sinter plant.

68. From September 29, 1995, to the present, the sinter plant's maximum allowable mass rate of emission of particulate matter has been 50 pounds per hour pursuant to OAC Rule 3745-17-11.

69. On September 29, 1995, AK Steel conducted a stack test to determine particulate



matter emissions resulting from the operation of the sinter machine windbox. On that day, the sinter machine windbox emitted an average of 67.2 pounds of particulate matter per hour of operation.

70. On February 16, 1996, AK Steel conducted a stack test to determine particulate matter emissions resulting from the operation of the sinter machine windbox. On that day, the sinter machine windbox emitted an average of 76.5 pounds of particulate matter per hour of operation.

71. On April 24, 1996, AK Steel conducted a stack test to determine particulate matter emissions resulting from the operation of the sinter machine windbox. On that day, the sinter machine windbox emitted an average of 51.9 pounds of particulate matter per hour of operation.

72. On diverse occasions from at least September 29, 1995, to at least April 24, 1996, including but not limited to the dates of the failed stack tests identified in Paragraphs 69 through 71, AK Steel operated the sinter plant windbox in excess of 50 pounds of particulate matter per hour of operation, in violation of OAC Rule 3745-17-11 and, pursuant to 40 C.F.R. § 52.23, the Ohio SIP and the CAA.

73. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**THIRD CLAIM FOR RELIEF**  
**(CAA: Benzene Coke NESHAP Violations)**

74. Paragraphs 1 through 32 are realleged and incorporated herein by reference.



75. At the Facility, AK Steel owns, operates, controls or supervises a process designed and operated for the separation and recovery of coal tar derivatives or by-products evolved from coal during the coking process of a coke oven battery ("coke by-product recovery plant").

76. Pursuant to 40 C.F.R. § 61.130, AK Steel's coke by-product recovery plant is subject to the benzene coke NESHAP.

77. AK Steel's coke by-product recovery plant processes "air pollutants," as that term is defined at 42 U.S.C. § 7602(g).

78. AK Steel's coke by-product recovery plant is a "stationary source," as that term is defined at 42 U.S.C. § 7411(a)(3).

79. The Weak Liquor Storage Tank, the Excess Flushing Liquor Pump Tank Steam Valves, the Excess Liquor Decanter Steam Valve, the Excess Liquor Decanter Seal Pot, and the Tar Precipitator Sump at AK Steel's coke by-product recovery plant are "process vessels," "tar-storage tanks," or "tar-intercepting sumps," as those terms are defined in 40 C.F.R. § 61.131.

80. On September 4, 1996, AK Steel inspected the connections and seals on the Weak Liquor Storage Tank using Reference Method 21, as referenced in Paragraph 29, above. During this inspection, AK Steel found a total hydrocarbon concentration of 600 parts per million above a background concentration.

81. Pursuant to 40 C.F.R. § 61.132(b)(1), the instrument reading indicating an organic chemical concentration of more than 500 parts per million above a background concentration, as measured by Reference Method 21, demonstrated that a leak had been detected.

82. AK Steel did not initiate and complete repair of the leak at the Weak Liquor Storage Tank until September 30, 1996, twenty-six days after detection of the leak.

83. AK Steel's failure to initiate repairs of the leak at the Weak Liquor Storage Tank within five calendar days of detection constitutes a violation of 40 C.F.R. § 61.132(b)(4) and, consequently, the CAA.



84. AK Steel's failure to complete repairs at the Weak Liquor Storage Tank within fifteen calendar days of detection constitutes a violation of 40 C.F.R. § 61.132(b)(3) and, consequently, the CAA.

85. On September 11, 1992, during the annual inspection conducted pursuant to 40 C.F.R. § 61.132(c) and referenced in Paragraph 30, AK Steel found system abnormalities on the Excess Flushing Liquor Pump Tank Steam Valves, the Excess Liquor Decanter Steam Valve, and the Excess Liquor Decanter Seal Pot at its coke by-product recovery plant at the Facility.

86. AK Steel did not initiate and complete repair of the Excess Flushing Liquor Pump Tank Steam Valves until September 30, 1992, nineteen days after discovery of the system abnormalities.

87. AK Steel did not initiate and complete repair of the Excess Liquor Decanter Steam Valve and the Excess Liquor Decanter Seal Pot until October 7, 1992, twenty-six days after discovery of the system abnormalities.

88. On December 1, 1993, during the annual inspection conducted pursuant to 40 C.F.R. § 61.132(c), AK Steel found system abnormalities on the Tar Precipitator Sump at its coke by-product recovery plant at the Facility.

89. AK Steel did not initiate repair of the Tar Precipitator Sump until December 9, 1993, eight days after discovery of the system abnormalities, and did not complete the repair until December 10, 1993, nine days after discovery of the system abnormalities.

90. AK Steel failed to initiate repairs within five calendar days of the system abnormalities discovered on September 11, 1992, and December 1, 1993, in violation of 40 C.F.R. § 61.132(c) and, consequently, the CAA.

91. AK Steel failed to repair within fifteen calendar days the system abnormalities discovered on September 11, 1992, in violation of 40 C.F.R. § 61.132(c) and, consequently, the CAA.

92. The Willputte Exhauster #2 at AK Steel's coke by-product recovery plant is an





"exhauster" and is "in benzene service" as those terms are defined by 40 C.F.R. § 61.131 and referenced in Paragraph 31, above. Consequently, pursuant to 40 C.F.R. § 61.130, the Willputte Exhauster #2 is subject to the benzene coke NESHAP.

93. Pursuant to 40 C.F.R. § 61.135(d)(1), an instrument reading indicating an organic chemical concentration of more than 10,000 parts per million, as measured by the method specified in 40 C.F.R. § 61.245(b), demonstrates that a leak has been detected.

94. On September 27, 1994, AK Steel conducted an inspection on the Willputte Exhauster #2 using the methods specified in 40 C.F.R. § 61.245(b) and found a total hydrocarbon concentration reading of 200,000 parts per million.

95. AK Steel did not initiate repair of the leak at the Willputte #2 Exhauster until October 4, 1994, seven days after detection of the leak.

96. AK Steel's failure to initiate repairs of the leak at the Willputte Exhauster #2 within five calendar days of detection constitutes a violation of Section 61.135(d)(2) of the benzene coke NESHAP, 40 C.F.R. § 61.135(d)(2) and, consequently, the CAA.

97. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997.

#### **FOURTH CLAIM FOR RELIEF**

##### **(CWA: Exceedance of NPDES Effluent Limitations)**

98. Paragraphs 1 through 8 and 33 through 43 are realleged and incorporated herein by reference.

99. AK Steel discharges to the waters of the United States pursuant to NPDES permit OH0009997, issued by the OEPA. This permit authorizes the discharge of several pollutants through specific outfalls into Dicks Creek, the North Branch of Dicks Creek, and the Great Miami River. NPDES permit OH0009997 was originally effective from December 1, 1992, through June 1, 1997 (the "1992 Permit"). AK Steel timely applied for a new NPDES permit,



and, by operation of Ohio law, the 1992 permit remained in effect until the State issued a new permit, effective December 1, 1997, to expire March 31, 2002 (the "1997 Permit").

100. Dicks Creek, the North Branch of Dicks Creek, and the Great Miami River eventually drain into the Ohio River and subsequently into the Mississippi River, and are, consequently, "navigable waters" within the meaning of Section 502(7) of the CWA, 33 U.S.C. § 1362(7).

101. The 1992 Permit established and the 1997 Permit establishes effluent limitations for several constituents, including, *inter alia*, phenolics, cyanide, oil and grease, zinc, nonfilterable residues, nitrogen in ammonia form, and nickel. These constituents are "pollutants," as that term is defined in Section 502(6) of the CWA, 33 U.S.C. § 1362(6).

102. On numerous occasions from at least August 25, 1993 through at least May 9, 1999, AK Steel discharged effluent from the Facility in excess of the final and interim effluent limitations contained in the 1992 Permit and the 1997 Permit. Each of these discharges constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.

103. AK Steel's violations of the 1992 Permit and the 1997 Permit effluent limitations include, but are not limited to, the dates set forth in the Table of Effluent Limitation Violations attached to this Complaint as Exhibit A and incorporated herein by reference.

104. AK Steel's discharges of pollutants in excess of the effluent limitations contained in the 1992 Permit and the 1997 Permit constitute violations of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

105. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31



U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**FIFTH CLAIM FOR RELIEF**  
**(CWA: Violation of NPDES Narrative Standards)**

106. Paragraphs 1 through 8 and 33 through 43 are realleged and incorporated herein by reference.

107. The 1992 Permit and the 1997 Permit, in Part III.2.C thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general condition that all effluent be free of substances in amounts which will alter the natural color of the receiving water to such a degree as to create a nuisance.

108. The 1992 Permit and the 1997 Permit, in Part III.2.A and III.2.D thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general conditions that all effluent be free of substances which will adversely affect aquatic life and be free of substances which either singly or in combination with other substances are toxic to aquatic life.

109. The 1992 Permit and the 1997 Permit, in Part III.2.B thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general conditions that all effluent be free of substances of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam, or sheen.

110. The 1992 Permit and the 1997 Permit, in Part III.11 thereof, prohibit bypassing or diverting of wastewater from a wastewater treatment works.

111. On numerous occasions, including, but not limited to, the dates specified in the Table of NPDES Narrative Standards Violations, attached to this Complaint as Exhibit B and incorporated herein by reference, AK Steel discharged pollutants in violation of one or more of the narrative standards set forth in Part III of the 1992 Permit and the 1997 Permit. Each of these



discharges constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.

112. AK Steel's discharges of pollutants in violation of one or more of the narrative standards contained in the 1992 Permit and the 1997 Permit constitute violations of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

113. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**SIXTH CLAIM FOR RELIEF**  
**(CWA: Unpermitted Discharges)**

114. Paragraphs 1 through 8 and 33 through 43 are realleged and incorporated herein by reference.

115. On November 4, 1997, personnel from the OEPA observed a seep discharging into a tributary to Dick's Creek at the Facility.

116. OEPA sampling of the seep discharge identified in Paragraph 115, conducted on November 4, 1997, detected high levels of polychlorinated biphenyls ("PCBs").

117. On November 12, 1998, OEPA observed another seep discharging into the tributary identified in Paragraph 115. OEPA sampling of this seep discharge, conducted on November 12, 1998, detected high levels of PCBs.

118. Neither the 1992 Permit nor the 1997 Permit allow AK Steel to discharge PCBs at the Facility.

119. The discharges of PCBs referenced in Paragraphs 115 through 117 each





constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.

120. On diverse occasions from at least December 7, 1995, through at least December 17, 1998, including but not limited to the dates of sampling identified in Paragraphs 115 through 117, AK Steel discharged pollutants, including but not limited to PCBs, into the waters of the United States from point sources at the Facility without the authorization of an NPDES permit.

121. Each day of each unpermitted discharge of pollutants is a separate violation of Section 301 of the CWA, 33 U.S.C. § 1311.

122. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**SEVENTH CLAIM FOR RELIEF**  
**(CWA: Failure to Meet Pretreatment Standards)**

123. Paragraphs 1 through 8 and 33 through 43 are realleged and incorporated herein by reference.

124. On July 27, 1983, pursuant to 40 C.F.R. § 403.10, the Administrator of U.S. EPA approved the State of Ohio's pretreatment program for POTWs. OEPA administers the State program on behalf of the State of Ohio. Consequently, OEPA is the "approval authority," as that term is defined at 40 C.F.R. § 403.3(c).

125. On April 16, 1985, OEPA approved a pretreatment program developed by the



City of Middletown, Ohio pursuant to 40 C.F.R. § 403.8. Consequently, the City of Middletown is the "control authority," as that term is defined at 40 C.F.R. § 403.12(a).

126. AK Steel owns and operates a coke battery and an associated by-products processing plant at the Facility which discharges wastewater to the Middletown POTW.

127. AK Steel is, and at all pertinent times has been, an "Industrial User" of a POTW under the jurisdiction of the City of Middletown, within the meaning of Section 502(18) of the CWA, 33 U.S.C. § 1362(18), and 40 C.F.R. § 403.3(h). AK Steel also is, and at all pertinent times has been, a "Significant Industrial User" of a POTW, within the meaning of 40 C.F.R. § 403.3(t).

128. AK Steel is an owner or operator of a source that is subject to an effluent standard or prohibition or pretreatment standard under Section 307 of the CWA, within the meaning of Section 307(d) of the CWA, 33 U.S.C. § 1317(d).

129. The Middletown POTW's pretreatment program includes local limits applicable to AK Steel's coke by-product processing plant that are contained in Industrial User Permit 100-96.

130. Pursuant to Industrial User Permit 100-96, AK Steel may discharge wastewater to the Middletown POTW through Outfall 100-01, subject to limits on the contents of the discharge on, *inter alia*, the acidity and alkalinity of the discharges. Pursuant to 40 C.F.R. § 403.5(d), the limits on acidity and alkalinity of the discharges through Outfall 100-01 constitute pretreatment standards within the meaning of Section 307(d) of the CWA, 33 U.S.C. § 1317(d).

131. AK Steel is an "owner or operator," as that term is defined in Section 306(a)(4) of the CWA, 33 U.S.C. § 1316(a)(4), of a by-product coke facility.

132. AK Steel discharged effluent into the Middletown POTW through Outfall 100-001 during the days listed and possessing the characteristics specified in the Table of Pretreatment Violations, attached to this Complaint as Exhibit C and incorporated herein by reference.



133. AK Steel's discharges to the Middletown POTW during the days listed and containing the substances specified in Exhibit C exceeded the applicable daily limits contained in Industrial User Permit 100-96 regarding the acidity and alkalinity of the discharges for the processes which discharge from Outfall 100-001.

134. Pursuant to 40 C.F.R. § 403.5(d), AK Steel's violations of the daily limits imposed by Industrial User Permit number 100-96 for the processes which discharge from Outfall 100-001 constitute violations of a pretreatment standard and thus are violations of Section 307(d) of the CWA, 33 U.S.C. § 1317(d).

135. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997.

**EIGHTH CLAIM FOR RELIEF**  
**(RCRA: Section 3008(h))**

*Discussed w/  
Barrell 6/23/02*

136. Paragraphs 1 through 8 and 44 through 47 are realleged and incorporated herein by reference.

137. At the Facility, AK Steel <sup>*has maintained*</sup> ~~maintains~~ an unpermitted waste pile containing tar decanter sludge from its coking operations.

138. Tar decanter sludge is listed as a hazardous waste (K087) at 40 C.F.R. § 261.32, and usually contains high concentrations of phenol and naphthalene, among other hazardous constituents listed in Appendix VIII to 40 C.F.R. Part 261.

139. At all times pertinent to this civil action, the Facility has been a "facility" within the meaning of 40 C.F.R. § 260.10.

140. At all times pertinent to this civil action, AK Steel has been the "owner" or "operator" of the Facility within the meaning of Section 3005(e)(1)(A) of RCRA, 42 U.S.C. § 6925(e)(1)(A).

141. The Facility has operated as an "interim status" facility within the



meaning of Section 3005(e) of RCRA, 42 U.S.C. § 6925(e).

142. Tar decanter sludge, a listed hazardous waste, has been released ~~and is being released~~ into the environment from AK Steel's waste pile at the Facility, identified in Paragraph 137.

143. Hazardous constituents, including but not limited to <sup>benzene</sup> phenol and naphthalene, have been released ~~and are being released~~ into the environment from AK Steel's waste pile at the Facility, identified in Paragraph 137.

144. Pursuant to authority delegated by the Administrator of U.S. EPA, the Hazardous Waste Division Director of U.S. EPA Region V has determined that there ~~is or~~ has been a release of hazardous waste and hazardous constituents into the environment from the Facility, as required by Section 3008(h) of RCRA, 42 U.S.C. § 6928(h).

145. Pursuant to Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), the United States is entitled to appropriate relief, including a temporary or permanent injunction requiring AK Steel to perform corrective action to investigate, study, address, and remedy the releases of hazardous waste and hazardous constituents into the environment from the Facility to prevent future releases at the Facility.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff, the United States of America, respectfully requests that this Court:

1. Permanently enjoin AK Steel from operating all units at the Facility, except in accordance with the CAA, CWA, RCRA, regulations implementing those statutes, and the Ohio SIP;
2. Order AK Steel to install emissions controls on the blast furnace sufficient to bring AK Steel into compliance with OAC Rules 3745-17-07 and 3745-17-08(B);
3. Order AK Steel to perform such corrective action as U.S. EPA determines is





necessary to study, investigate, address, and remedy the releases of hazardous waste and hazardous constituents into the environment from the Facility.

4. Order AK Steel to take appropriate measures to remedy, mitigate, and offset the effects of its violations of the CAA, CWA, RCRA, regulations implementing those statutes, and the Ohio SIP;

5. Order AK Steel to pay a civil penalty of up to \$25,000 per day for each violation of the CAA or CWA occurring on or before January 30, 1997, and \$27,500 per day for each violation of the CAA or CWA occurring after January 30, 1997;

6. Award the United States its costs and disbursements in this action; and

7. Grant such other relief as this Court deems just and proper.

Respectfully submitted,

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LOIS J. SCHIFFER  
Assistant Attorney General  
Environment and Natural Resources  
Division  
United States Department of Justice

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ROBERT W. DARNELL  
Environment and Natural Resources

Division

United States Department of Justice  
P.O. Box 7611  
Ben Franklin Station  
Washington, D.C. 20044

SHARON J. ZEALEY  
United States Attorney  
Southern District of Ohio



By:

GERALD F. KAMINSKI (Bar No. 0012532)

Assistant United States Attorney

Room 220

Potter Stewart Federal Courthouse

5<sup>th</sup> and Walnut Streets

Cincinnati Ohio, 45202

(513) 684-3711

OF COUNSEL:

ROBERT S. GUENTHER

KRIS P. VEZNER

United States Environmental Protection

Agency, Region 5

77 West Jackson Boulevard (C-14J)

Chicago, Illinois 60604-3590



6/30/2022

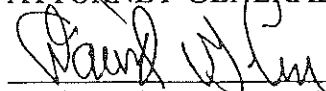
UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION OF OHIO

UNITED STATES OF AMERICA,	:	CIVIL ACTION NO. C-1-00530
	:	
Plaintiff,	:	JUDGE HERMAN J. WEBER
	:	
vs.	:	<u>MOTION TO INTERVENE</u>
	:	
AK STEEL CORPORATION,	:	
	:	
Defendant.	:	
	:	
STATE OF OHIO	:	
	:	
Applicant for Intervention :	:	

Pursuant to Rule 24 of the Federal Rules of Civil Procedure, the State of Ohio respectfully moves for leave to intervene as a party plaintiff in this action. The State requests such leave so that it may assert the claims set forth in the attached proposed State's complaint. The State has a statutory right to intervene pursuant to the citizen suit provisions of the Clean Air Act, Section 304, 42 U.S.C. 7604(b)(1)(B), and the Clean Water Act, Section 505, 33 U.S.C. 1365(b)(1)(B).

Respectfully submitted,

BETTY D. MONTGOMERY  
ATTORNEY GENERAL OF OHIO

  
\_\_\_\_\_  
David G. Cox (0042724)

Trial Attorney  
Kimberly Rhoads (0061740)  
Lori A. Massey (00427226)  
Assistant Attorneys General  
Environmental Enforcement Section  
30 E. Broad St., 25<sup>th</sup> Fl.  
Columbus, Ohio 43215  
(614) 466-2766



UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION OF OHIO

UNITED STATES OF AMERICA,	:	CIVIL ACTION NO. C-1-00530
	:	
Plaintiff,	:	JUDGE HERMAN J. WEBER
	:	
vs.	:	<u>STATE OF OHIO'S</u>
	:	<u>MEMORANDUM IN SUPPORT</u>
	:	<u>OF MOTION TO INTERVENE</u>
AK STEEL CORPORATION,	:	
	:	
Defendant.	:	
	:	
STATE OF OHIO	:	
	:	
Applicant for Intervention	:	

This is a civil action initiated by the United States Attorney General under Section 113(b) of the Clean Air Act ("CAA"), 42 U.S.C. 7413(b), Section 309(b) and (d) of the Clean Water Act ("CWA"), 33 U.S.C. 1319(b) and (d), and Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. 6928, against AK Steel Corporation ("Defendant").

With respect to the CAA, the United States charged Defendant with violations of the CAA and the State of Ohio's federally approved and enforceable State Implementation Plan ("SIP") promulgated thereunder. The State of Ohio's SIP is codified in the Ohio Administrative Code ("OAC"). Defendant's operations emit particulate matter in excess of the limits and requirements set forth in the State of Ohio's SIP, OAC Rules 3745-15-07, 3745-17-07, and 3745-17-08.

With respect to the CWA, the United States charged Defendant with violations of the CWA based on violations of a National Pollutant Discharge Elimination System





("NPDES") permit issued by the Ohio Environmental Agency (OEPA), as well as other violations of the CWA. As to RCRA, the United States charged Defendant with releasing hazardous waste and hazardous waste constituents into the environment, triggering corrective action requirements.

Rule 24(a) of the Federal Rules of Civil Procedure, in pertinent part, provides that "upon timely application anyone shall be permitted to intervene in an action when a statute of the United States confers an unconditional right to intervene . . . ." The State claims such an unconditional right based on the statutory language of the citizen suit provisions of both the CAA, Section 304, 42 U.S.C. 7604(b)(1)(B) and the CWA, Section 505, 33 U.S.C. 1365(b)(1)(B).

The CAA, Section 304, 42 U.S.C. 7604(b)(1)(B), states that where the Administrator is prosecuting a civil action to enforce the CAA, "any person may intervene as a matter of right." As used in the quoted language, "person" is defined in Section 302 of the Act to include "an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof." 42 U.S.C. 7602(e). The express language of Section 302 includes the State as a person with the unconditional right to intervene under the citizens suit provision of the Act. See, Hancock v. Train, 426 U.S. 167, 96 S.Ct. 2006, 48 L.Ed.2d 555 (1976) (states may bring citizens suits under 42 U.S.C. 7604 of the CAA); State of Alabama, ex rel. Graddick v. Veterans Administration, 648 F.Supp. 1208 (M.D. Ala. 1986) (state attorney general may bring citizen suits for violations of the CAA).



The CWA, Section 505, 33 U.S.C. 1365(b)(1)(B), states that where the Administrator is prosecuting a civil action to enforce the CWA, "any citizen may intervene as a matter of right." "Citizen" is defined as "a person or persons having an interest which is or may be adversely affected." CWA, Section 505, 33 U.S.C. 1365(g). "Person" is defined as "an individual, corporation, partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body." The CWA, Section 502, 33 U.S.C. 1362. See United States v. City of Toledo, 867 F.Supp. 595 (N.D. Ohio 1994) (Ohio is a citizen with a right to intervene under the CWA).

With respect to air issues, the State of Ohio seeks to intervene to protect its interest in enforcement of its SIP, the provisions of the CAA, Chapter 3704 of the Ohio Revised Code, and the OAC rules promulgated thereunder. As to water issues, the state seeks to intervene to protect its interest in enforcement of its NPDES permit. These interests may be adversely affected by the outcome of the pending case. If the case were to proceed in the State's absence, this Court may issue a decision adverse to the State's views on the meaning and enforcement of its laws and permit. Justice is better served by having the State present as a party to this action so the court may be fully apprised of the State's interpretation of its laws and permit.

In addition, the court should exercise supplemental jurisdiction pursuant to 28 U.S.C. 1367 over all the claims in the State's proposed complaint. 28 U.S.C. 1367(a) provides that as a general matter, "in any civil action in which the district courts have original jurisdiction, the district courts shall have supplemental jurisdiction over all other claims that are so related to claims in the action within such original jurisdiction that they form part of the same case or controversy under Article III of the United States



Constitution. Such supplemental jurisdiction shall include claims that involve the joinder or intervention of additional parties.” The United States Supreme Court has indicated the broad scope of the term “case or controversy” by indicating the few types of disputes that are not within the scope of that phrase:

In part those words limit the business of federal courts to questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process. And in part those words define the role assigned to the judiciary in a tripartite allocation of power to assure that the federal courts will not intrude into areas committed to the other branches of government. Justiciability is the term of art employed to give expression to this dual limitation placed upon federal courts by the case-and-controversy doctrine.

Justiciability is itself a concept of uncertain meaning and scope. Its reach is illustrated by the various grounds upon which questions sought to be adjudicated in federal courts have been held not to be justiciable. Thus, no justiciable controversy is presented when the parties seek adjudication of only a political question, when the parties are asking for an advisory opinion, when the question sought to be adjudicated has been mooted by subsequent developments, and when there is no standing to maintain the action.

Flast v. Cohen, 392 U.S. 83, 94-95, 88 S.Ct. 1942, 1949- 50, 20 L.Ed.2d 947 (1968).

By using the term “case or controversy” Congress has referenced the outer most limits of federal court jurisdiction. Thus, the intent of 28 U.S.C. 1367 is to allow federal courts to reach all controversies that relate to the underlying federal cause of action. Here, the underlying federal causes of action in the State’s complaint all relate to the protection of the environment, which is the ultimate issue in the case. In addition, every cause of action in the State’s complaint arises from a State program that has the same goals and interests as the United States seeks to protect in its complaint. Both the United States and the State of Ohio seek to protect the public and the environment from Defendant’s discharges into the air and water and Defendant’s mismanagement of



hazardous waste. As such, both complaints are part of the same “case or controversy.” See United States v. Toledo, supra ((in a citizen suit under CWA, the court exercised supplemental jurisdiction over Ohio’s related non-federal claims); State v. PVS Chemicals, Inc., 50 F.Supp.2d 171, 48 ERC 1670 (W.D.N.Y., Nov 04, 1998) (NO. 97-CV-596A) (in a citizen suit under CWA, the court exercised supplemental jurisdiction over New York State’s related non-federal claims, including nuisance claims); Albahary v. City and Town of Bristol, Connecticut, 963 F.Supp. 150 (D.Conn.1997) (in citizen suit brought under RCRA and CWA alleging groundwater contamination, court exercised supplemental jurisdiction over several state law claims, including nuisance claim).; Chester Residents Concerned for Quality Living v. Delcora Sewage Treatment Plant, 1994 WL 618476, 39 ERC 1860 (E.D.Pa. 1994) (NO. CIV. A. 94-5639) ((in a citizen suit under CAA, the court exercised supplemental jurisdiction over related non-federal claims, including nuisance claims).

The State’s intervention will not delay or complicate this matter. The United States filed this case on June 29, 2000, so no action beyond the filing of this complaint has occurred. The State’s claims are similar or identical to the claims brought by the United States. Thus, the discovery, dispositive pleadings and issues for trial will likely be similar or identical as to the two plaintiffs.

The citizen suit provisions in federal environmental laws provide important channels for public participation in judicial proceedings. Particularly, Section 304 of the Clean Air Act and Section 505 of the Clean Water Act allow “persons” or “citizens,” respectively, the unconditional right of intervention. This right extends to states. As such, the State of Ohio has met all of the requirements for intervention of right under





Rule 24 of the Federal Rules of Civil Procedure. Therefore, its Motion to Intervene should be granted.

Respectfully submitted,

BETTY D. MONTGOMERY  
ATTORNEY GENERAL OF OHIO

A handwritten signature in black ink, appearing to read "David G. Cox", is written over a horizontal line.

David G. Cox (0042724)  
Trial Attorney  
Kimberly Rhoads (0061740)  
Lori A. Massey (00427226)  
Assistant Attorneys General  
Environmental Enforcement Section  
30 E. Broad St., 25<sup>th</sup> Fl.  
Columbus, Ohio 43215  
(614) 466-2766



Certificate of Service

I hereby certify that a copy of the foregoing **Motion to Intervene and Memorandum in Support** will be served or otherwise delivered together with Intervenor's Complaint pursuant to Federal Rule of Civil Procedure 4 and was served by regular United States mail, postage prepaid, on June 30, 2000, upon:

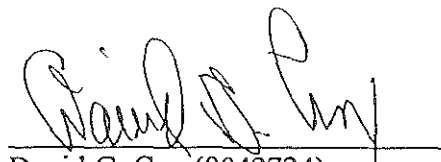
Christopher R. Schraff, Esq.  
J. Jeffrey McNealey, Esq.  
Porter, Wright, Morris & Arthur  
41 South High Street  
Columbus, Ohio 43215

Paul W. Casper, Jr., Esq.  
Frost & Jacobs  
201 East Fifth Street, Suite 2500  
Cincinnati, Ohio 45202-4182

Robert S. Guenther  
Kris P. Vezner  
United States Environmental Protection  
Agency  
Region V  
77 West Jackson Blvd. (C-14J)  
Chicago, Illinois 60604-3590

Robert W. Darnell  
Trial Attorney  
Environment and Natural Resources  
Division  
United States Department of Justice  
P.O. Box 7611  
Ben Franklin Station  
Washington, D.C. 20044

Gerald K. Kaminski  
Assistant United States Attorney  
Room 220  
Potter Stewart Federal Courthouse  
5<sup>th</sup> and Walnut Streets  
Cincinnati, Ohio 45202

  
\_\_\_\_\_  
David G. Cox (0042724)  
Trial Attorney



IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION

THE UNITED STATES OF AMERICA,  
AND STATE OF OHIO – INTERVENOR

: CASE NO. C-1-00530

:

: JUDGE WEBER

:

:

Plaintiff,

:

vs.

:

INTERVENOR STATE OF OHIO'S  
COMPLAINT FOR INJUNCTIVE  
RELIEF AND CIVIL PENALTIES

:

AK STEEL CORPORATION,

:

:

Defendant.

:

The State of Ohio, by and through its Attorney General, Betty D. Montgomery ("Plaintiff"), at the written request of the Director of Environmental Protection files this Complaint and alleges as follows:

NATURE OF ACTION

1. This is a civil action brought against AK Steel Corporation ("Defendant" or "AK Steel") for injunctive relief and/or the assessment of civil penalties for violations of R.C. Chapters 3704, 3734, 6111, and the rules promulgated under those chapters in the Ohio Administrative Code ("OAC"), the Clean Air Act ("CAA"), 42 U.S.C. § 7401 et seq., the Clean Water Act ("CWA"), 33 U.S.C. § 1311 et seq., regulations implementing those statutes, and the



Ohio State Implementation Plan ("SIP"). The violations alleged herein occurred and are occurring at AK Steel's integrated steel production facility located at 1801 Crawford Street, Middletown, Butler County, Ohio.

2. The State brings claims in this action pursuant to Section 505(b)(1)(B) of the CWA Act, 33 U.S.C. § 1365 (b)(1)(B), R.C. Chapter 6111, Section 304(b)(1)(B) of the CAA, 42 U.S.C. 7604(b)(1)(B), and R.C. Chapter 3704 for the violations referenced in paragraph 1 above. The State is a "citizen" as that term is defined in Section 505(g) of the CWA, 33 U.S.C. § 1365(g) and a "person" as that term is defined in Section 302(e) of the CAA, 42 U.S.C. 7602.

### JURISDICTION AND VENUE

3. The State has filed a Motion of Intervention as a matter of right in this action, pursuant to the citizen's suit provision as set forth in paragraph 2.

4. This Court has jurisdiction over the subject matter of this civil action pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) and (d) of the CWA, 33 U.S.C. § 1319(b) and (d) and 1365 (b); and 28 U.S.C. §§ 1331, 1345, and 1355. This Court has jurisdiction over the claims asserted under R.C. Chapters 3704, 3734, 3767 and 6111 pursuant to 28 U.S.C. § 1367 (supplemental jurisdiction).

5. Venue properly lies in this district pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) of the CWA, 33 U.S.C. § 1319(b); and 28 U.S.C. §§ 1391(b), (c), and 1395(a), because Defendant resides and/or is located in and conducts business in this district and because the violations alleged herein occurred within this judicial district.





## DEFENDANT

6. Defendant AK Steel Corporation is a "person" as defined by R.C. §§ 3704.01(O), 3734.01(G) and 6111.01(I), OAC 3745-33-01, OAC 3734-50-10(8)(G), Section 302 (e) of the CAA, 42 U.S.C. § 7602(e), and Section 502(5) of the CWA, 33 U.S.C. § 1362(5).

7. Defendant AK Steel Corporation is incorporated in the State of Delaware and licensed to do business in Ohio.

8. Defendant AK Steel owns and/or operates a steel manufacturing factory at a facility which includes, but is not limited to: a blast furnace and related operations and a basic oxygen furnace shop and related operations; landfills; contractor or third party-operated operations; and other land uses located primarily in Middletown, Lemon Township, Butler County, Ohio, (hereinafter collectively referred to as "the Facility").

9. Prior to 1989, the Facility was owned by Armco, Inc. In 1989, Armco, Inc. transferred the Facility (and associated liabilities) to Armco Steel Company, L.P. In 1994, Armco Steel Company, L.P. transferred the Facility (and associated liabilities) to AK Steel Corporation. At all times relevant to this action, AK Steel or its predecessors owned and operated the Facility as described in paragraph 8 above.

## STATUTORY AND REGULATORY BACKGROUND

### **A. CLEAN AIR ACT**

10. The Clean Air Act is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the CAA, 42 U.S.C. § 7470(b)(1).



**1. Public Nuisance & Visible Emission Provisions of the Ohio SIP**

11. On May 27, 1994, the Administrator of the U.S. EPA approved Ohio Administrative Rule ("OAC") Rule 3745-17-07 as part of the federally enforceable SIP for the State of Ohio. 59 Fed. Reg. 27464. OAC Rule 3745-17-07 superseded Ohio Pollution Control Board Rule AP-3-07 and regulates visible emissions from stationary sources.

12. OAC Rule 3745-17-07(B)(3) provides that visible particulate matter emissions of fugitive dust from, among other things, blast furnace casthouses shall not exceed twenty percent opacity as a six-minute average. O.A.C. Rule 3745-17-07(B) provides, in part, that visible particulate matters emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.

13. On March 31, 1981, the Administrator of the U.S. EPA conditionally approved portions of Ohio Administrative Code 3745-17-08 for the primary total suspended particulate nonattainment area of Middletown, Ohio. 46 Fed. Reg. 19468. At the time of this approval, Ohio had submitted OAC Rules 3745-17-01 through 11 for approval. The March 31, 1981, Federal Register notice only approved OAC 3745-17-08 as it applied to Armco, Inc., now AK Steel.

14. On March 31, 1981, the Administrator of the U.S. EPA approved Chapter 3745-15 of the Ohio Administrative Code. 46 Fed. Reg. 19468. OAC Rule 3745-15-07 provides, in part, that no person shall cause an unlawful nuisance through the emission of substances in such manner or such amounts as to cause unreasonable injury or damage to property.



15. On May 27, 1994, the Administrator of the U.S. EPA approved portions of the Ohio SIP revisions for particulate matter regulations. This approval included the remaining portions of OAC 3745-17-08. 59 Fed. Reg. 27464.

16. OAC Rule 3745-17-08(B) provides that "no person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported, or stored; or a building or its appurtenances or a road to be used, constructed, altered, repaired, or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne." Such reasonably available control measures shall include, *inter alia*, the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. OAC Rule 3745-17-08(B)(3).

17. OAC Rule 3745-17-08(C) provides that "[f]or purposes of determining compliance with the requirements of paragraph (B) of this rule, the Director shall consider a control measure to be adequate if it complies with the following: (1) the visible particulate emission limitation(s) contained in Rule 3745-17-07 of the Administrative Code; and (2) if applicable, the control requirements contained in paragraph (B)(3) of this rule."

18. OAC Rule 3745-17-08(A)(2) provides that "notwithstanding the exemptions in paragraph (A)(3) of this rule [which includes exemptions for AK Steel], the requirements of paragraph (B) of this rule shall apply to any fugitive dust source regardless of location if, in the Director's judgment, probable cause exists to believe that such source is causing or contributing to a [nuisance in ] violation of rule 3745-15-07 or 3745-17-02 of the Administrative Code."

19. 40 C.F.R. § 52.23 provides, *inter alia*, that failure to comply with any approved regulatory provision of a SIP renders the person or governmental entity so failing to comply in



violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the CAA.

## 2. Enforcement Provisions

20. Section 113(b) of the CAA, 42 U.S.C. § 7413(b), authorizes the United States to commence a civil action for injunctive relief and assessment of civil penalties whenever a person has violated or is in violation of any requirement or prohibition of the CAA or any applicable implementation plan. Such violations include: violations of the SIP nuisance rule; violations of SIP particulate emission limits; and violations of SIP visible emission limits. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

21. ORC 3704.05(A) prohibits any person from causing, permitting or allowing the emission of any air contaminant in violation of any Rule adopted by the Director of Environmental Protection ("Director") pursuant to ORC 3704.03(E). ORC 3704.05(H) prohibits any person from violating any Rule of the Director.

22. AK Steel is a "person" within the meaning of Section 302(e) of the Act, 42 U.S.C. 7602(e), ORC 3704.01(J), and Ohio SIP Rules 3745-15-01(U) and 3745-50-10(A)(83).

23. AK Steel is an "owner" or "operator" as defined by Ohio SIP Rule 3745-15-01(T) of a "facility" as defined by Ohio SIP Rule 3745-15-01(P).





24. AK Steel's facility contains multiple "sources" as defined by Ohio SIP Rule 3745-15-01.

25. The sources of air contaminants located at AK Steel include at least one blast furnace known as Source No. P925 and two vessels at a basic oxygen furnace known as Source Nos. P926 and P927.

26. Sources P925, P926 and P927 are "sources" within the meaning of Ohio SIP Rule 3745-15-01(W). The AK Steel facility is an "air contaminant source" within the meaning of Ohio SIP Rule 3745-15-01.

27. Pursuant to Sections 113(b) and 304 of the Act, 42 U.S.C. 7413 (b) and 7604, any person who violates any requirement or prohibition of any applicable implementation plan of the Act is subject to a civil penalty of up to \$25,000 per day for each day of violation.

28. Sections 3704.06 (B) and (C) authorize the Attorney General of Ohio to commence a civil action for injunctive relief and civil penalties of up to \$25,000 per day for each day of violation, including days which occur after the filing of this Complaint.

#### **B. CLEAN WATER ACT**

29. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. 33 U.S.C. § 1251(a).

30. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant into navigable waters of the United States by any person except in compliance with, *inter alia*, a National Pollutant Discharge Elimination ("NPDES") permit issued by U.S. EPA or an authorized state pursuant to Section 402 of the CWA, 33 U.S.C. § 1342.



31. Section 402(a) of the CWA, 33 U.S.C. § 1342(a), provides that U.S. EPA or an authorized state, in issuing NPDES permits, shall prescribe conditions for such permits as the permitting authority determines are necessary to carry out the provisions of the CWA.

32. At all times relevant to this complaint, the State of Ohio has been and continues to be authorized by the Administrator of U.S. EPA, pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b), to administer the NPDES permit program for discharges into navigable waters within its jurisdiction. The Ohio Environmental Protection Agency ("Ohio EPA") exercises this authority on behalf of the State of Ohio.

33. Section 309 (b) and (d) of the CWA, 33 U.S.C. § 1319 (b) and (d), authorizes the Administrator of EPA to commence a civil action for injunctive relief and civil penalties of up to \$25,000 per day for each violation of the CWA occurring on or prior to January 30, 1997, and \$27,500 per day for each violation of the CWA occurring after January 30, 1997.

34. Pursuant to Sections 309(d) and 505 of the Act, 33 U.S.C. §§1309(d) and 1365, this court may grant the State injunctive relief for violations of Section 301 of the CWA, 33 U.S.C. §1311, and the terms and conditions of an NPDES permit issued under Section 402 of the CWA, 33 U.S.C. §1342.

35. R.C. Sections 6111.04 and 6111.07 prohibit any person from placing or discharging or causing to be placed or discharged into waters of the state, any sewage, industrial waste or other waste except in accordance with the terms of an NPDES permit issued by Ohio's Director of Environmental Protection ("Director"). R.C. Section 6111.07 prohibits any person from violating any order, rule or term or condition of a permit issued by the Director pursuant to R.C. Sections 6111.01 – 6111.08.



36. R.C. Sections 6111.07 and 6111.09 authorize the Attorney General of Ohio to commence a civil action for injunctive relief and civil penalties of up to \$10,000 per day for each violation of R.C. Sections 6111.04 and/or 6111.07.

### **C. HAZARDOUS WASTE**

37. The Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq., and its amendments establish a comprehensive regulatory program for generators of hazardous waste and for the management of facilities that treat, store, or dispose of hazardous wastes. Pursuant to authority granted by RCRA, U.S. EPA has promulgated regulations applicable to such generators and hazardous waste management facilities, codified at 40 C.F.R. Parts 260-271.

38. The State of Ohio is authorized by the Administrator of U.S. EPA, pursuant to Section 3006 of RCRA, 42 U.S.C. § 6926(b), to administer and enforce a hazardous waste program to issue and enforce permits for the storage, treatment or disposal of hazardous waste. The Ohio Environmental Protection Agency exercises this authority on behalf of the State of Ohio. Ohio has adopted portions of Chapter 3734 of the Revised Code, and rules promulgated thereunder in order to carry out its regulation of hazardous waste.

39. 3734.11(A) states that no person shall violate any Section of R.C. Chapter 3734 or any rule adopted under R.C. Chapter 3734.

40. Defendant has generated hazardous wastes at the Site, including terne coating flux skimming wastes, spent pickle liquor wastes and coking tar sludge wastes. These wastes are stored primarily in tanks.

41. As the following paragraphs will demonstrate, Defendant has engaged in the



illegal storage of hazardous waste and has failed to have a written closure plan and provide a closure cost estimate. In addition, Defendant has failed to prevent spills and overflows from its tank systems, failed to inspect its tank systems and failed to have adequate secondary containment for its tank systems to prevent releases of hazardous wastes to the environment.

42. Defendant engaged in the “storage” of hazardous waste, as that term is defined in OAC 3745-50-10(A)(98).

43. Defendant is an “owner” and/or “operator” of a hazardous waste facility as those terms are defined at OAC 3745-50-10(A)(77) and 3745-50-10(A)(76). Defendant engaged in “management” or “hazardous waste management”, as those terms are defined in OAC 3745-50-10(A)(65), at the Facility.

44. Defendant is a “generator” of hazardous waste as that term is defined in OAC 3734-50-10(A)(39).

45. Defendant’s operations at the Facility constitutes a “facility” or “hazardous waste facility” as those terms are defined in OAC 3745-50-10(A)(33). The Facility is not operating under a hazardous waste permit issued in accordance with R.C. Chapter 3734.

#### **AIR POLLUTION VIOLATIONS**

#### **FEDERAL CITIZEN SUIT CLAIMS UNDER THE CLEAN AIR ACT**

#### **FIRST CLAIM FOR RELIEF** **(CAA: OHIO SIP AIR POLLUTION NUISANCE)**

46. Paragraphs 1 through 45 are realleged and incorporated herein by reference.





47. At the Facility, AK Steel owns and operates a blast furnace and related operations, and a basic oxygen furnace shop and related operations (BOF shop) that emit dust, ash and other particulate matter.

48. The blast furnace and BOF shop are each a "stationary source," as that term is defined at Section 302(z) of the CAA, 42 U.S.C. § 7602(z).

49. The blast furnace and BOF shop are each a "source," as that term is defined at OAC Rules 3745-17-01(A) and 3745-15-01.

50. The blast furnace and BOF shop are each operations, processes or activities that release or may release particulate emissions into the ambient air.

51. OAC 3745-15-07(A) provides, in part, that no person shall cause an unlawful public nuisance, the emission or escape into the open air of fumes, gases, vapors, odors, or any other substance in such manner or in such amounts as to endanger the health, safety welfare of the public, or cause unreasonable injury or damage to property.

52. Periodically, from at least October 10, 1990 and continuing to the present, Defendant has, in conjunction with the operation of the blast furnace and related operations and the BOF shop and related operations, permitted or allowed the emission or escape into the open air of particulate matter and odors which have endangered the health, safety, and welfare of the public and/or or caused unreasonable injury or damage to property

53. Unless restrained by an order of the Court, AK Steel will continue to violate OAC Rule 3745-15-07, the Ohio SIP, and the CAA.



54. The Defendant's actions as set forth in this count constitute a violation of R.C. 3704.05(A) and (G) and OAC 3745-15-07(A), for which Defendant is subject to injunctive relief and civil penalties of up to \$25,000 per day per violation pursuant to R.C. 3704.06.

55. For each violation referred to in this Count, AK Steel is subject to injunctive relief and civil penalties of not more than \$25,000 per day for each day of violation, pursuant to Section 113(b) of the Act, 42 U.S.C. 7413(b) and C.F.R. 52.23 (1994). Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**SECOND CLAIM FOR RELIEF**  
**(CAA: OHIO SIP VISIBLE EMISSIONS VIOLATIONS)**

56. Paragraphs 1 through 55 are realleged and incorporated herein by reference.

57. On June 20, 1997, the Director of the OEPA found that probable cause existed to believe that the blast furnace and BOF shop was causing or contributing to a violation of OAC Rule 3745-15-07.

58. The requirements of OAC Rule 3745-17-07 have applied to the blast furnace and BOF shop continuously from at least June 20, 1997, to the present.

59. OAC 3745-17-07(B)(1) provides, in part, that visible emissions from a fugitive dust source shall not exceed twenty percent opacity as a three minute average. OAC 3745-17-07(B)(3) provides, in part, that visible emissions from a fugitive dust source such as a blast furnace cast house shall not exceed twenty percent opacity as six minute average.

60. The blast furnace and BOF shop are fugitive dust sources.



61. On multiple occasions on at least September 18, 1997, August 12, 1998, September 8, 1998, October 26, 1998 and November 24, 1998, visible particulate matter emissions of fugitive dust from the blast furnace through its casthouse exceeded twenty percent opacity as a six-minute average.

62. On multiple occasions on at least August 17, 1998, visible particulate matter emissions of fugitive dust from the BOF shop through its roof monitors have exceeded twenty percent opacity as a three minute average.

63. On multiple occasions from at least September 18, 1997, to the present, including, but not limited to, the dates of the observed exceedances identified in Paragraphs 52 through 55, AK Steel has violated OAC Rule 3745-17-07 and, pursuant to 40 C.F.R. § 52.23, the Ohio SIP and the CAA.

64. The Defendant's actions as set forth in this count constitute a violation of O.A.C. 3745-17-07(B) and R.C. 3704.05(A) and (G), for which Defendant is subject to injunctive relief and a civil penalty of up to \$25,000 per day per violation pursuant to R.C. 3704.06.

65. Unless restrained by an order of the Court, AK Steel will continue to violate OAC Rule 3745-17-07, the Ohio SIP, and the CAA.

66. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.



**THIRD CLAIM FOR RELIEF**  
**(CAA: OHIO SIP RACM)**

67. Paragraphs 1 through 66 are realleged and incorporated herein by reference.

68. At the Facility, AK Steel owns and operates a blast furnace and related operations including a casthouse, and a BOF shop and related operations that emit dust, ash and other particulate matter.

69. The blast furnace casthouse and BOF shop are each a "stationary source," as that term is defined at Section 302(z) of the CAA, 42 U.S.C. § 7602(z).

70. The blast furnace casthouse and BOF shop are each a "source," as that term is defined at OAC Rules 3745-17-01(A) and 3745-15-01.

71. The blast furnace casthouse and BOF shop are each operations, processes or activities that release or may release particulate emissions into the ambient air.

72. O.A.C. 3745-17-08(B) provides, in part, that no person shall operate any fugitive dust source without taking or installing reasonably available control measures (RACM) to prevent fugitive dust from becoming airborne.

73. From at least September 18, 1997 and continuing until the present, AK Steel has permitted the release of fugitive dust from the blast furnace casthouse without employing reasonably available control measures in violation of O.A.C. 3745-17-08(B).

74. From at least August 17, 1998 and continuing until the present, AK Steel has permitted the release of fugitive dust from the BOF shop without employing reasonably available control measures in violation of O.A.C. 3745-17-08(B).





75. The Defendant's actions as set forth in this count constitute a violation of O.A.C. 3745-17-08(B) and R.C. 3704.05(A) and (G), for which Defendant is subject to injunctive relief and a civil penalty of up to \$25,000 per day per violation pursuant to R.C. 3704.06.

76. For each violation referred to in this Count, AK Steel is subject to injunctive relief and civil penalties of not more than \$25,000 per day for each day of violation, pursuant to Section 113(b) of the Act, 42 U.S.C. 7413(b) and C.F.R. 52.23 (1994).

### **STATE SUPPLEMENTAL CLAIMS**

#### **FOURTH CLAIM FOR RELIEF** **AIR POLLUTION NUISANCE**

77. Paragraphs 1 through 76 are realleged and incorporated herein by reference.

78. R.C. 3704.05(G) provides, in part, that no person shall violate any rule of the Director adopted under R.C. Chapter 3704.

79. R.C. 3704.05(A) provides, in part, that no person shall cause, permit or allow the emission of an air contaminant in violation of a rule adopted by the Director.

80. At the Facility, AK Steel owns and operates a blast furnace and related operations, and a BOF shop and related operations that emit dust, ash and other particulate matter.

81. The blast furnace and BOF shop are each a "stationary source," as that term is defined at Section 302(z) of the CAA, 42 U.S.C. § 7602(z).

82. The blast furnace and BOF shop are each a "source," as that term is defined at OAC Rules 3745-17-01(A) and 3745-15-01.

83. The blast furnace and BOF shop are each operations, processes or activities that release or may release particulate emissions into the ambient air.



84. OAC 3745-15-07(A) provides, in part, that no person shall cause an unlawful public nuisance, the emission or escape into the open air of fumes, gases, vapors, odors, or any other substance in such manner or in such amounts as to endanger the health, safety welfare of the public, or cause unreasonable injury or damage to property.

85. Periodically, from at least October 10, 1990 and continuing to the present, Defendant has, in conjunction with the operation of the blast furnace and related operations and basic oxygen furnace shop and related operations, permitted or allowed the emission or escape into the open air of particulate matter and odors which have endangered the health, safety, and welfare of the public and/or caused unreasonable injury or damage to property.

86. The Defendant's actions as set forth in this count constitute a violation of R.C. 3704.05(A) and (G) and OAC 3745-15-07(A), for which Defendant is subject to injunctive relief and civil penalties of up to \$25,000 per day per violation pursuant to R.C. 3704.06.

**FIFTH CLAIM FOR RELIEF**  
**OHIO SIP VISIBLE EMISSIONS VIOLATIONS**

87. Paragraphs 1 through 86 are realleged and incorporated herein by reference.

88. R.C. 3704.05(G) provides, in part, that no person shall violate any rule of the Director adopted under R.C. Chapter 3704. R.C. 3704.05(A) provides, in part, that no person shall cause, permit or allow the emission of an air contaminant in violation of a rule adopted by the Director.

89. On June 20, 1997, the Director of the OEPA found that probable cause existed to believe that the blast furnace and BOF shop was causing or contributing to a violation of OAC Rule 3745-15-07.



90. The requirements of OAC Rule 3745-17-07 have applied to the blast furnace and BOF shop continuously from at least June 20, 1997, to the present.

91. OAC 3745-17-07(B)(1) provides, in part, that visible emissions from a fugitive dust source shall not exceed twenty percent opacity as a three minute average. OAC 3745-17-07(B)(3) provides, in part, that visible emissions from a fugitive dust source such as a blast furnace cast house shall not exceed twenty percent opacity as six minute average.

92. The blast furnace and BOF shop are fugitive dust sources.

93. On multiple occasions on at least September 18, 1997, August 12, 1998, September 8, 1998, October 26, 1998 and November 24, 1998, visible particulate matter emissions of fugitive dust from the blast furnace through its casthouse exceeded twenty percent opacity as a six-minute average.

94. On multiple occasions on at least August 17, 1998, visible particulate matter emissions of fugitive dust from the BOF shop through its roof monitors have exceeded twenty percent opacity as a three minute average.

95. On diverse occasions from at least September 18, 1997, to the present, including, but not limited to, the dates of the observed exceedances identified in Paragraphs 93 and 94, AK Steel has violated OAC Rule 3745-17-07 and, pursuant to 40 C.F.R. § 52.23, the Ohio SIP and the CAA.

96. The Defendant's actions as set forth in this count constitute a violation of O.A.C. 3745-17-07(B) and R.C. 3704.05(A) and (G), for which Defendant is subject to injunctive relief and a civil penalty of up to \$25,000 per day per violation pursuant to R.C. 3704.06.



97. Unless restrained by an order of the Court, AK Steel will continue to violate OAC Rule 3745-17-07, the Ohio SIP, and the CAA.

**SIXTH CLAIM FOR RELIEF**  
**FAILURE TO EMPLOY RACM**

98. Paragraph 1 through 97 are realleged and incorporated herein by reference.

99. R.C. 3704.05(A) provides, in part, that no person shall cause, permit or allow the emission of an air contaminant in violation of a rule adopted by the Director.

100. R.C. 3704.05(G) provides, in part, that no person shall violate any rule of the Director adopted under R.C. Chapter 3704.

101. At the Facility, AK Steel owns and operates a blast furnace and related operations including a casthouse, and a BOF shop and related operations that emit dust, ash and other particulate matter.

102. The blast furnace casthouse and BOF shop are each a "stationary source," as that term is defined at Section 302(z) of the CAA, 42 U.S.C. § 7602(z).

103. The blast furnace casthouse and BOF shop are each a "source," as that term is defined at OAC Rules 3745-17-01(A) and 3745-15-01.

104. The blast furnace casthouse and BOF shop are each operations, processes or activities that release or may release particulate emissions into the ambient air.

105. O.A.C. 3745-17-08(B) provides, in part, that no person shall operate any fugitive dust source without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne.

106. From at least September 18, 1997 and continuing until the present, AK Steel has





permitted the release of fugitive dust from the blast furnace casthouse shop without employing reasonably available control measures in violation of O.A.C. 3745-17-08(B).

107. From at least August 17, 1998 and continuing until the present, AK Steel has permitted the release of fugitive dust from the BOF shop without employing reasonably available control measures in violation of O.A.C. 3745-17-08(B).

108. The Defendant's actions as set forth in this count constitute a violation of O.A.C. 3745-17-08(B) and R.C. 3704.05(A) and (G), for which Defendant is subject to injunctive relief and a civil penalty of up to \$25,000 per day per violation pursuant to R.C. 3704.06.

**SEVENTH CLAIM FOR RELIEF**  
**COMMON LAW PUBLIC NUISANCE**

109. Paragraphs 1 through 108 are realleged and incorporated herein by reference.

110. Periodically, from at least October 10, 1990 and continuing until the present, Defendant has engaged in the release of particulate matter from its Facility, which interfered with the rights of the public, thereby constituting an unreasonable use of property to the detriment of the public.

111. As a result of Defendant's activities as described in this count of the Complaint, Plaintiff has incurred costs including but not limited to the costs of personnel time for investigating and inspecting Defendant's Facility, and the costs of bringing this action.

112. Defendant's conduct as described in this count of the Complaint constitutes a common law public nuisance, resulting in Plaintiff and its citizens suffering the threat of damages to the State's natural resources and the continuing unreasonable risk of harm presented by the improper release of particulate matter from Defendant's Facility.



113. Defendant has caused a threat to the public health, welfare and/or environment. Defendant knew or had reason to know that the acts alleged in this count of the Complaint have constituted such a threat and interference with the rights of the public.

114. Defendant's conduct as described in this count of this Complaint is a common law public nuisance, by reason of which Plaintiff has suffered damages. Defendant is liable to the Plaintiff for compensatory damages including but not limited to the costs of personnel time for investigating and inspecting and the costs of bringing this action, in an amount in excess of Twenty-five Thousand Dollars (\$25,000). Defendant is further liable for compensatory damages for such additional costs as are incurred in the bringing of this action.

115. By reason of Defendant's continuing nuisance, Plaintiff has suffered and continues to suffer damages that are irreparable and cannot be completely compensated by law. Defendant is responsible for abating this nuisance. Plaintiff is entitled to injunctive relief to abate and enjoin this nuisance.

### WATER POLLUTION VIOLATIONS

#### FEDERAL CITIZEN SUIT CLAIMS UNDER THE CLEAN WATER ACT

##### EIGHTH CLAIM FOR RELIEF Violations of The Clean Water Act

116. Paragraphs 1 through 115 are realigned and incorporated here in by reference.

117. Effective March 31, 1987, and pursuant to R.C. 6111.03(J), the Director of Ohio Environmental Protection Agency issued, to Armco Inc., NPDES Permit No. IID00001\*BD for the Facility. NPDES Permit No. IID00001\*BD by its terms, was set to expire on March 28, 1992.



118. On June 1, 1988, and pursuant to R.C. 6111.03(J), the Director modified in part NPDES Permit No. IID00001\*BD and reissued the permit as Permit No. IID00001\*BD, as modified by Permit No. IID00001\*CD. NPDES Permit No. IID00001\*BD, as modified by NPDES Permit No. IID00001\*CD, became effective July 22, 1988.

119. Effective May 13, 1989, NPDES Permit No. IID00001\*BD, as modified by NPDES Permit No. IID00001\*CD, was transferred from Armco Inc. to Armco Steel, who assumed all responsibilities and liabilities for the terms and conditions of the permit.

120. NPDES Permit No. IID00001\*BD, as modified by NPDES Permit No. IID00001\*CD, by its terms, was set to expire on March 28, 1992; however, pursuant to R.C. 119.06(C) and OAC 3745-33-04(D), the terms and conditions of the permit continued beyond the expiration of the permit until the effective date of a renewal permit.

121. On September 30, 1992, and pursuant to R.C. 6111.03(J), the Director issued to Armco Steel a renewal permit, NPDES Permit No. IID00001\*DD, allowing the discharge of pollutants from the Facility subject to limits, terms and conditions set forth within the permit. NPDES Permit No. IID00001\*DD became effective on December 1, 1992 and by its terms was set to expire June 1, 1997 (hereafter referred to as the "1992 permit").

122. On November 3, 1992 and pursuant to R.C. 6111.03(J), the Director modified in part NPDES Permit No. IID00001\*DD and reissued the permit to Armco Steel as NPDES Permit No. IID00001\*ED. NPDES Permit No. IID00001\*ED became effective on December 18, 1992.

123. Effective on or about April 7, 1994, NPDES Permit No. IID00001\*ED was transferred from Armco Steel to AK Steel, who assumed all liability and responsibility for the terms and conditions of the permit.



124. NPDES Permit No. IID00001\*ED by its own terms was set to expire on June 1, 1997, however, pursuant to R.C.119.06(C) and OAC 3745-33-04(D), the terms and conditions of NPDES Permit No. IID00001\*ED continued beyond the expiration of the permit until the effective date of the subsequent renewal permit, NPDES Permit No. IID00001\*FD.

125. Effective December 1, 1997, and pursuant to R.C. 6111.03(J), the Director issued to AK Steel NPDES Permit No. IID00001\*FD, allowing the discharge of pollutants from the Facility subject to limits, terms and conditions set forth within the NPDES Permit. NPDES Permit No. IID00001\*FD governs discharges from the Facility from its effective date of December 1, 1997 to the present. NPDES Permit No. IID00001\*FD is by its terms to expire on March 31, 2002 (hereinafter referred to as the "1997 permit").

126. On or about November 5, 1997, Ohio EPA revised the NPDES permit to correct administrative errors and provided AK Steel Corporation with a revised copy.

127. At all times relevant to this Complaint, Defendant was operating its wastewater "treatment works", as that term is defined in R.C. Section 6111.01, and pursuant to permits issued by the Director or had renewal applications for such permits pending with the Director.

128. The permits authorize the discharge of "pollutants" within the meaning of Section 502(6) and (12) of the CWA, 33 U.S.C. § 1362(6) and (12) from a "point source" within the meaning of Section 502(14) of the CWA, 33 U.S.C. § 1362 (14) into the Great Miami River, Dicks Creek and the North Branch of Dicks Creek and or their tributaries, which flow into the Ohio River.

129. The Great Miami River, Dicks Creek, North Branch of Dicks Creek and their tributaries are all "waters of the State" as that term is defined in R.C. 6111.01(H), and "navigable





waters" within the meaning of Section 502(7) of the CWA, 33 U.S.C. § 1362(7).

130. AK Steel through the discharge of its effluent from the outfalls listed in its NPDES permits, at all times relevant to this complaint, has placed "sewage", "industrial waste" and/or "other waste" into "waters of the state" as those terms are defined by R.C. 6111.01.

131. The 1992 and 1997 permits and certain permit modifications established effluent limitations for several constituents, including, *inter alia*, phenolics, cyanide, oil and grease, zinc, nonfilterable residues, nitrogen in ammonia form, and nickel. These constituents are "pollutants," as that term is defined in Section 502(6) of the CWA, 33 U.S.C. § 1362(6).

132. On numerous occasions from at least August 25, 1993 through at least May 9, 1999, AK Steel discharged effluent from the Facility in excess of the final and interim effluent limitations contained in the 1992 and 1997 permits and certain permit modifications. Each of these discharges constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.

133. AK Steel's violations of the 1992 and 1997 permits and violations and certain permit modifications effluent limitations include, but are not limited to, the dates and violations set forth in the Table of Daily and Monthly Exceedences attached to this Complaint as Attachment A incorporated herein by reference.

134. AK Steel's discharges of pollutants in excess of the effluent limitations contained in the 1992 and 1997 permit and certain permit modifications constitute violations of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).



135. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

**NINTH CLAIM FOR RELIEF**  
**Violation of NPDES Permit Narrative Standards**

136. The State incorporates herein the allegations contained in paragraphs 1 through 135.

137. The 1992 and 1997 permits and certain permit modifications, in Part III.2.C thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general condition that all effluent be free of substances in amounts which will alter the natural color of the receiving water to such a degree as to create a nuisance.

138. The 1992 and 1997 permits and certain permit modifications, in Part III.2.A and III.2.D thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general conditions that all effluent be free of substances which will adversely affect aquatic life and be free of substances which either singly or in combination with other substances are toxic to aquatic life.

139. The 1992 and 1997 permits and certain permit modifications, in Part III.2.B thereof, permit discharges from designated outfalls to the waters of the United States, subject to the general conditions that all effluent be free of substances of an oily, greasy, or surface-active



nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam, or sheen.

140. The 1992 and 1997 permits and certain permit modifications, in Part III.11 thereof, prohibit bypassing or diverting of wastewater from a wastewater treatment works.

141. On numerous occasions, including, but not limited to, the dates and violations specified in the Spill Event Table attached to this Complaint as Attachment B and incorporated herein by reference, AK Steel discharged pollutants in violation of one or more of the narrative standards set forth in Part III of the 1992 and 1997 permits and certain permit modifications. Each of these discharges constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.

142. AK Steel's discharges of pollutants in violation of one or more of the narrative standards contained in the 1992 and 1997 permits and certain permit modifications constitute violations of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

143. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.



**TENTH CLAIM FOR RELIEF**  
**Unpermitted Discharges**

144. The State incorporates herein the allegations contained in paragraphs 1 through 143.

145. The 1992 and 1997 permits and certain permit modifications authorize AK Steel to discharge pollutants only from certain outfalls enumerated in said permits. Discharge by AK Steel of any pollutants only from any point source not specifically authorized in said permits into navigable waters, or water of the State is a violation of each such permit.

146. On November 4, 1997, personnel from the Ohio EPA observed a seep discharging into a tributary to Dick's Creek at the Facility.

147. Ohio EPA sampling of the seep discharge referenced in the above paragraph, conducted on November 4, 1997, detected high levels of polychlorinated biphenyls ("PCBs").

148. On November 12, 1998, Ohio EPA observed another seep discharging into the tributary to Dick's Creek at the Facility. Ohio EPA sampling of this seep discharge, conducted on November 12, 1998, detected high levels of PCBs.

149. Neither the 1992 nor 1997 permits and permit modifications allow AK Steel to discharge PCBs at the Facility.

150. The discharges of PCBs referenced in the above paragraphs each constitutes the "discharge of pollutants" through a "point source" into "navigable waters of the United States" within the meaning of Section 502(12), (14) and (7), 33 U.S.C. § 1362(12), (14) and (7), respectively.





151. Since a date not yet known to the Ohio EPA, but on at least November 4, 1997 through or on at least December 17, 1998, AK Steel discharged pollutants, including but not limited to PCBs, into the waters of the United States from point sources at the Facility without the authorization of an NPDES permit.

152. Each day of each unpermitted discharge of pollutants is a separate violation of Section 301 of the CWA, 33 U.S.C. § 1311 and R.C. Chapter 6111.

153. R.C. Section 6111.04 and 6111.07 prohibit any person to whom the Director has issued a permit from placing or discharging, or causing to be placed or discharged, into waters of the state any "pollution", "sewage", "industrial wastes", and/or "other wastes", as these terms are defined under R.C. Section 6111.01, in excess of the permissible discharge limits authorized by its NPDES permit.

154. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), AK Steel is subject to injunctive relief and civil penalties of up to \$25,000 per day for each violation occurring on or before January 30, 1997. Pursuant to Section 309(d) of the CWA, 33 U.S.C. § 1319(d), and the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, AK Steel is subject to civil penalties of up to \$27,500 per day for each violation occurring after January 30, 1997.

#### STATE SUPPLEMENTAL CLAIMS

##### ELEVENTH CLAIM FOR RELIEF NPDES Permit Limit Exceedences

155. The State incorporates herein the allegations contained in paragraphs 1 through 154.



156. R.C. Section 6111.04 and 6111.07 prohibit any person to whom the Director has issued a permit from placing or discharging, or causing to be placed or discharged, into waters of the state any "pollution", "sewage", "industrial wastes", and/or "other wastes", as these terms are defined under R.C. Section 6111.01, in excess of the permissible discharge limits authorized by its NPDES permit.

157. The 1992 and 1997 permits and certain permit modifications established effluent limitations for several constituents, including, *inter alia*, phenolics, cyanide, oil and grease, zinc, nonfilterable residues, nitrogen in ammonia form, and nickel. These constituents are "sewage", "industrial waste" and/or "other waste" which is/was discharged into "waters of the state" as those terms are defined by R.C. 6111.01.

158. On numerous occasions from at least July 1988 through at least May 1999, AK Steel discharged effluent from the Facility into waters of the State in violation and excess of the final and interim effluent limitations contained in the 1992 and 1997 permits and certain permit modifications for various pollutant parameters.

159. AK Steel's violations of the 1992 and 1997 permits and certain permit modifications effluent limitations include, but are not limited to, the dates and violations set forth in the Table of Daily and Monthly Exceedences attached to this Complaint as Attachment A incorporated herein by reference.

160. The acts or omissions alleged in this Count constitute violations of R.C. 6111.04 and 6111.07(A), for which Defendant is subject to injunctive relief pursuant to R.C. 6111.07(B), and for which Defendant is liable to pay the State of Ohio a civil penalty of up to ten thousand dollars (\$10,000) for each day of each violation, including each day subsequent to the filing of



the Complaint, pursuant to R.C. 6111.09.

**TWELFTH CLAIM FOR RELIEF**  
**Placing toxic or harmful substance into waters of the State**  
**In Violation of NPDES Permit Narrative Standards**

161. The State incorporates herein the allegations contained in paragraphs 1 through 160.

162. The 1992 and 1997 permits and certain permit modifications, in Part III.2.C thereof, permit discharges from designated outfalls to the waters of the state, subject to the general condition that all effluent be free of substances in amounts which will alter the natural color of the receiving water to such a degree as to create a nuisance.

163. The 1992 and 1997 permits and certain permit modifications, in Part III.2.A and III.2.D thereof, permit discharges from designated outfalls to the waters of the state, subject to the general conditions that all effluent be free of substances which will adversely affect aquatic life and be free of substances which either singly or in combination with other substances are toxic to aquatic life.

164. The 1992 and 1997 permits and certain permit modifications, in Part III.2.B thereof, permit discharges from designated outfalls to the waters of the state, subject to the general conditions that all effluent be free of substances of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam, or sheen.

165. The 1992 and 1997 permits and certain permit modifications, in Part III.11 thereof, prohibit bypassing or diverting of wastewater from a wastewater treatment works.



166. On numerous occasions, including, but not limited to, the dates and violations specified in the Spill Event Table attached to this Complaint as Attachment B and incorporated herein by reference, AK Steel discharged pollutants in violation of one or more of the narrative standards set forth in Part III of the 1992 and 1997 permits and certain permit modifications. Each of these discharges constitutes the discharges of pollution through an outfall or other unauthorized discharge point into "waters of the state" within the meaning of R.C. 6111.01.

167. AK Steel's discharges of pollutants in violation of one or more of the narrative standards contained in the 1992 and 1997 permits and certain permit modifications constitute violations of R.C. Chapter 6111.

168. R.C. 6111.07(A) prohibits any person from violating or failing to perform any duty imposed by R.C. 6111.01 through 6111.08, or from violating any order, rule, or term or condition of a permit issued by the Director pursuant to these Revised Code sections.

169. Rule 3745-1-04 (A) requires that surface water of the state be free from suspended solids or other substances entering the waters as a result of human activity that adversely affect aquatic life and form objectionable sludge deposits.

170. OAC 3745-1-04(C) provides that waters of the state be free from specified substances in amounts which will alter the color and/or other conditions of the receiving water to such a degree as to create a nuisance.

171. OAC 3745-1-04 (D) provided that waters of the state be free from of substances which enter the waters as a result of human activity in concentrations that are toxic or harmful to human or aquatic life.





172. OAC 3745-1-04(B) provided that waters of the state be free from substances of an oily, greasy, and of other floating debris, in amounts sufficient to be unsightly or cause degradation.

173. AK Steel on numerous occasions, including, but not limited to, the dates specified in the Table of Spill Events, attached to this Complaint as Attachment B and incorporated herein by reference, released substances in violation of one or more of the general water quality criteria set forth in OAC 3745-1-04.

174. The acts or omissions alleged in this Count constitutes violations of R.C. 6111.04, 6111.07 and OAC 3745-1-04, for which Defendant is liable for a civil penalty of up to Ten Thousand Dollars (\$10,000) for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 6111.09 and for which Plaintiff is entitled to injunctive relief pursuant to R.C. 6111.07.

**THIRTEENTH CLAIM FOR RELIEF**  
**Unpermitted Discharges**

175. The State incorporates herein the allegations contained in paragraphs 1 through 174.

176. R.C. Sections 6111.04 prohibits any person from causing pollutions or placing or causing to be placed any sewage or other wastes in a location where they cause pollution of any waters of the state without a valid, unexpired permit issued by the Director.

177. R.C. Section 6111.07 (A) provides, in part, that no person shall violate any duty imposed by R.C. Section 6111.01 through 6111.08.



178. On November 4, 1997, personnel from the Ohio EPA observed a seep discharging into a tributary to Dick's Creek at the Facility.

179. Ohio EPA sampling of the seep discharge referenced in the above paragraph, conducted on November 4, 1997, detected high levels of polychlorinated biphenyls ("PCBs").

180. On November 12, 1998, Ohio EPA observed another seep discharging into the tributary to Dick's Creek at the Facility. Ohio EPA sampling of this seep discharge, conducted on November 12, 1998, detected high levels of PCBs.

181. Since a date not yet know, but on at least November 4, 1997 through or on at least December 17, 1998, AK Steel discharged pollutants known and not yet known, including but not limited to PCBs, into the waters of the state without the authorization of an NPDES permit.

182. Defendant has discharged or caused to be discharged runoff from the coking tar sludge pile to the ground and to waters of the state on dates not yet known but at least from on or about November 18, 1991 to December 3, 1991.

183. Defendant, in addition, has spilled or discharged industrial waste and/or other wastes from various locations at the Facility without prior treatment. These unauthorized and unpermitted discharges have occurred on various dates, including, but not limited to those dates specified in the Table of Spill Events, attached to this Complaint as Attachment B.

184. Neither the 1992 or 1997 permits and permit modifications allow AK Steel to discharge PCBs, runoff from the coking tar sludge pile at the Facility or unpermitted release or set out in Attachment B.

185. Each day of each unpermitted discharge of pollutants, sewage, industrial waste and/or other wastes constitutes a separate violation of R.C. 6111.04 and 6111.07.



186. The acts or omissions of Defendant as alleged in this Count constitute violations of R.C. 6111.04 and 6111.07, for which Defendant is subject to injunctive relief pursuant to R.C. 6111.07(B), and for which Defendant is liable to pay to the State of Ohio a civil penalty of up to ten thousand dollars (\$10,000) for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 6111.09.

**FOURTEENTH CLAIM FOR RELIEF**  
**Violation of Water Quality Standards**

187. The State incorporates herein the allegations contained in paragraphs 1 through 186.

188. R.C. 6111.07(A) prohibits any person from violating or failing to perform any duty imposed by R.C. 6111.01 through 6111.08, or from violating any order, rule, or term or condition of a permit issued by the Director pursuant to these Revised Code sections.

189. Ohio Admin. Code rule 3745-1-04 (A) requires that surface water of the State be free from suspended solids or other substances entering the waters as a result of human activity that adversely affect aquatic life and form objectionable sludge deposits.

190. OAC 3745-1-04(C) provides that waters of the state be free from specified substances in amounts which will alter the color and/or other conditions of the receiving water to such a degree as to create a nuisance.

191. OAC 3745-1-04 (D) provided that waters of the state be free from of substances which enter the waters as a result of human activity in concentrations that are toxic or harmful to human or aquatic life.



192. OAC 3745-1-04(B) provided that waters of the state be free from substances of an oily, greasy, and of other floating debris, in amounts sufficient to be unsightly or cause degradation.

193. On numerous occasions, including, but not limited to, the dates specified in the Table of Spill Events, attached to this Complaint as Attachment B and incorporated herein by reference, and PCB discharges released substances to surface waters of State in violation of one or more of the general water quality criteria set forth in OAC 3745-1-04.

194. OAC 3745-1-07 provides water quality criteria to the various water bodies in the State of Ohio. The rule lists chemical-specific criteria that apply to surface waters within the Ohio River drainage basin.

195. OAC 3745-1-34, effective October 31, 1997, provides Ohio River drainage basin water quality criteria for the protection of aquatic life (table 34-1) and for the protection of human health (table 34-4). At all times relevant to this Complaint, and prior to the adoption of OAC 3745-1-34, water quality criteria for certain chemical specific criteria were established in OAC 3745-1-07.

196. Since a date not yet known, but on at least November 4, 1997 and on at least December 17, 1998, industrial waste or other wastes seeped from the Facility to surface waters of the State resulting in pollution in excess of the water quality standards for various pollutants, including, but not limited to PCBs and polynuclear aromatic hydrocarbons ("PAHs").

197. On dates not yet known, but from at least July of 1995 and continuing through the present, industrial waste or other wastes were discharged or were placed from the Facility





resulting in exceedances of the water quality standards for various pollutants, including, but not limited to zinc, lead, selenium, and phenol. The levels of these pollutants exceeded water quality standards for aquatic life and/or human health provided for in OAC 3745-1-34 and OAC 3745-1-07.

198. On dates not yet known, but from at least July of 1995, and continuing through the present, industrial waste or other wastes from the Facility were discharged or were placed in a location where they entered surface waters of the State such that they caused nonattainment of the designated aquatic life use for the Great Miami River and Dicks Creek as required by O.A.C. Chapter 3745-1.

199. The acts or omissions of Defendant as described in this Count constitute violations of R.C. 6111.07 and OAC 3745-1-07 and 34 for which Defendant is liable for a civil penalty of up to Ten Thousand Dollars (\$10,000) for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 6111.09 and for which Plaintiff State of Ohio is entitled to injunctive relief pursuant to R.C. 6111.07.

**FIFTEENTH CLAIM FOR RELIEF**  
**Illegal Installation of a Treatment System**

200. The State incorporates herein the allegations contained in paragraphs 1 through 199.

201. Under R.C. Section 6111.03, the Director of the Ohio EPA is authorized to adopt rules relating to issuance of permits to install ("PTI"), NPDES permit and other plan approvals for "disposal systems", as that term is defined under R.C. Section 6111.01(G). In the rules promulgated by the Director, pursuant to R.C. Section 6111.03, PTI approval is authorized by



OAC Rule 3745-31-02. Rule 3745-31-02 provides that "no person shall cause, permit or allow the installation of a ... new disposal system ... without first obtaining a permit to install from the director", including plans for the system. Further, R.C. Sections 6111.44, 6111.45 and 6111.46 establish a regulatory program which both provides that the Director of Ohio EPA shall exercise general supervision of the "means installed for the collection, treatment, or disposal of sewage" and prohibit the installation of any new disposal system until the applicant has applied and received an approval from the Director of Ohio EPA for the plans for the system and PTI.

202. AK Steel, since at lease December of 1997 and again on December of 1998 constructed and installed a new trenching system with other treatment devices at the Facility to collect, store and treat PCB's and other industrial wastes without first obtaining a PTI and plan approval from the Director, in violation of R.C. Sections 6111.03, 6111.44 through 6111.46 and OAC 3745-31-02. AK Steel continues to operate the PCB trench system with an approved PTI.

203. The acts and omissions of Defendant, as described in this count of the Complaint, constitute violations of R.C. Sections 6111.03, 6111.07, 6111.44 through 6111.46 and OAC 3745-31-02, for which each Defendant is subject to injunctive relief, pursuant to R.C. Section 6111.07(B), and for which Plaintiff State of Ohio is entitled to a civil penalty of up to ten thousand dollars (\$10,000.00) per day for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. Section 6111.09(A).

**SIXTEENTH CLAIM FOR RELIEF**  
**Illegal Discharges to Ground Waters of the State**

204. The State incorporates herein the allegations contained in paragraphs 1 through 203.



205. 6111.07(A) prohibits any person from violating or failing to perform any duty imposed by R.C. 6111.01 through 6111.08, or from violating any order, rule, or term or condition of a permit issued by the Director pursuant to these Ohio Revised Code sections.

206. 6111.04 and 6111.07 prohibit any person to whom the Director has issued a permit from placing or discharging, or causing to be placed or discharged, into waters of the State, any unpermitted sewage, industrial waste and/or other wastes in excess or not in accordance with the discharges authorized by its NPDES permit.

207. NPDES Permits Nos. IID00001\*BD, IID00001\*CD, IID00001\*DD, IID00001\*ED and IID00001\*FD apply only to discharges of industrial waste or other wastes to surface waters. The NPDES permitting process does not authorize any discharges to the ground or ground water of the State.

208. Defendant, since at least November 1989 and at other times yet unknown to Plaintiff, has discharged or caused to be discharged coal tar in the area of the Coal Tar Storage Tank at the Facility to the ground and/or ground waters of the State. The discharge(s) resulted in benzene contamination to ground waters of the State since at least November 1989 through at least March 24, 1999.

209. The acts or omissions alleged in this Count constitute violations of R.C. 6111.04 and 6111.07(A), for which Defendant is subject to injunctive relief pursuant to R.C. 6111.07(B), and for which Defendant is liable to pay the State of Ohio a civil penalty of up to ten thousand dollars (\$10,000) for each day of each violation, including each day subsequent to the filing of the Complaint, pursuant to R.C. 6111.09.



**HAZARDOUS WASTE VIOLATIONS**

**STATE SUPPLEMENTAL CLAIMS**

**SEVENTEENTH CLAIM FOR RELIEF**

**Violations of Ohio Hazardous Waste Laws Regarding  
Illegal Storage of Hazardous Waste**

210. The State incorporates herein the allegations contained in paragraphs 1- 209.

211. R.C. 3734.02(E) prohibits a person from establishing or operating a hazardous waste facility without a hazardous waste permit.

212. R.C. 3734.02(F) provides in pertinent part that no person shall store or dispose of hazardous waste on any premises in Ohio other than at one of the five listed types of facilities.

213. Defendant's Facility is not one of the five types of facilities authorized by R.C. 3734.02(F) at which an owner or operator can store or dispose of hazardous waste.

214. Defendant unlawfully established a hazardous waste facility at the facility and disposed and/or stored coking tar sludge hazardous waste (K087) since at least November 21, 1989, and continuing until a date not yet know when Defendant documents cleanup by meeting the closure performance standards of OAC 3745-66-11.

215. The acts or omissions of Defendant as described in this Count violate R.C. 3734.02(E), 3734.02(F), and 3734.11, for which conduct Plaintiff is entitled to injunctive relief pursuant to R.C. 3734.10 and R.C. 3734.13(C) and for which Defendant is liable for a civil penalty of up to Ten Thousand Dollars, (\$10,000) per day for each day of violation, including each day subsequent to the filing of this complaint, pursuant to R.C. 3734.13(G).





**EIGHTEENTH CLAIM FOR RELIEF**  
**Violations of Ohio Hazardous Waste Laws Regarding**  
**Failure to Have a Written Closure Plan**

216. The State incorporates herein the allegations contained in paragraphs 1- 215.

217. OAC 3734-55-11 and 3745-66-11 require that the operator of a hazardous waste facility must close the facility in a manner that minimizes the need for further maintenance and controls, minimizes or eliminates, to the extent necessary to prevent threats to human health and the environment, post-closure escapes of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

218. OAC 3745-55-12 and 3745-66-12 require that the owner or operator of a facility shall have a written closure plan.

219. Beginning some time prior to November 21, 1989, and continuing until June 13, 2000, Defendant established or operated a hazardous waste facility at the Facility by storing or disposing of coking tar sludge hazardous waste (K087) on a coal storage pile.

220. Since at least November 21, 1989, and continuing until at least May 6, 1991, Defendant failed to have a written closure plan for the coking tar sludge hazardous waste (K087) pile that meets the requirements of OAC 3745-55-12 or 3745-66-12.

221. The acts and omissions of Defendant as described in this Count violates OAC 3734-55-11 or 3745-66-11, OAC 3745-55-12 or 3745-66-12, and OAC 3745-55-13(B) or 3745-66-13(B), and R.C. 3734.11, for which conduct Plaintiff is entitled to injunctive relief pursuant to R.C. 3734.10 and 3734.13(C), and for which Defendant is liable for a civil penalty of up to Ten



Thousand Dollars (\$10,000) per day for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 3734.13(C).

**NINETEENTH CLAIM FOR RELIEF**  
**Violations of Ohio Hazardous Waste Laws Regarding**  
**Failure to Have Closure Cost Estimate**

222. The State incorporates herein the allegations contained in paragraphs 1- 221.

223. OAC 3745-55-42 and 3745-66-42 provide that the owner or operator of a facility must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements of the applicable rules pertaining to closure.

224. Since at least November 21, 1989, and continuing at least until October 15, 1993, Defendant failed to have a detailed written closure estimate of the cost of closing coking tar sludge hazardous waste (K087) pile as provided by OAC 3745-55-42 and 3745-66-42.

225. The acts and omissions of Defendant as described in this count violates OAC 3745-55-42 or 3745-66-42 and R.C. 3734.11(A) for which Plaintiff is entitled to injunctive relief pursuant to R.C. 3734.10 and R.C. 3734.13(C) and for which Defendant is liable for a civil penalty of up to Ten Thousand Dollars (\$10,000) per day for each day of violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 3734.13(C).

**TWENTIETH CLAIM FOR RELIEF**  
**Violations of Ohio Hazardous Waste Laws Regarding Failure to**  
**Have Adequate Secondary Containment for Hazardous Waste Tank Systems**

226. The State incorporates herein the allegations contained in paragraphs 1- 225.

227. OAC 3745-55-93(A) and 3745-66-93(A) provide that tank systems or components specified in those rules must be provided with secondary containment meeting the requirements



contained in OAC 3745-55-93 and 3745-66-93.

228. Defendant's tanks are among those required to have secondary containment meeting the requirements of OAC 3745-55-93(A) and 3745-66-93(A).

229. From a date not yet known but prior to November 21, 1989, and until at least March 8, 1991, Defendant failed to have adequate secondary containment for its 10,600 gallon spent pickle liquor tank system as required by OAC 3745-55-93 and 3745-66-93.

230. On a date not yet known but prior to November 2, 1990, Defendant failed to prevent the release of spent pickle liquor hazardous wastes (K062) from a 75,000 gallon tank system to the environment by utilizing adequate secondary containment as required by OAC 3745-55-93 and 3745-66-93.

231. From at least February 15, 1994 through approximately March 27, 1995, Defendant violated OAC 3745-55-93 or 3745-66-93 by failing to provide secondary containment free of gaps and cracks in compliance the requirements contained in OAC 3745-55-93 and 3745-66-93 for the Ashland tank system at the Facility.

232. The acts and omissions of Defendant as described in this Count violate OAC 3745-55-93 or 3745-66-93 and R.C. 3734.11, for which conduct Plaintiff is entitled to injunctive relief pursuant to R.C. 3734.10 and 3734.13(C), and for which Defendant is liable for a civil penalty of up to Ten Thousand Dollars (\$10,000) per day for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 3734.13(C).

**TWENTY-FIRST CLAIM FOR RELIEF**  
**Violations of Ohio Hazardous Waste Laws Regarding Failure to Prevent**  
**Spills and Overflows of Hazardous Waste from Spent Pickle Liquor Tank Systems**



233. The State incorporates herein the allegations contained in paragraphs 1- 232.

234. OAC 3745-55-94(B) and 3745-66-94(B) require the owner or operator of a facility to use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems, including, at a minimum, spill prevention controls, overflow prevention controls, and maintenance of freeboard.

235. Defendant failed to prevent spills and overflows of spent pickle liquor hazardous waste (K062) from one or more of its tank systems by utilizing appropriate controls and practices as required by OAC 3745-55-94 and 3745-66-94, on at least the following dates:

- (a) February 1, 1989;
- (b) May 25, 1991;
- (c) October 10, 1991;
- (d) February 16, 1993;
- (e) August 4, 1993;
- (f) January 12, 1994;
- (g) January 11, 1996;
- (h) August 10, 1996;
- (i) October 18, 1996; and
- (j) April 22, 1997.

236. The acts and omissions of Defendant as described in this Count violate OAC 3745-55-94(B) or 3745-66-94(B) and R.C. 3734.11, for which conduct Plaintiff is entitled to injunctive relief pursuant to R.C. 3734.10 and 3734.13(C), and for which Defendant is liable for





a civil penalty of up to Ten Thousand Dollars (\$10,000) per day for each day of each violation, including each day subsequent to the filing of this Complaint, pursuant to R.C. 3734.13(C).

**TWENTY-SECOND CLAIM FOR RELIEF**  
**Violations of Ohio Hazardous Waste Laws Regarding Failure to Inspect**  
**Spent Pickle Liquor Tanks and Secondary Containment Systems**

237. The State incorporates herein the allegations contained in paragraphs 1- 236.

238. OAC 3745-55-95 and 3745-66-95 provide that the owner or operator of a facility must inspect its tank and secondary containment systems at least once on each operating day.

239. Defendant failed to inspect the spent pickle liquor (K062) tank system at least once on each operating day as required by OAC 3745-55-95 and 3745-66-95 on at least the following dates:

- (a) January 4, 1992;
- (b) February 6, 22, and 29, 1992;
- (c) March 9, 12, 13, 14, 18, 19, 21, and 26, 1992; and
- (d) April 6, 7, 8, 16, and 17, 1992.

240. The acts and omissions of Defendant as alleged in this Count violate OAC 3745-55-95 or 3745-66-95 and R.C. 3734.11 for which Defendant is subject to injunctive relief pursuant to R.C. Sections 3734.10 and 3734.13(C) and for which Defendant is liable to pay to the State of Ohio a civil penalty of up to Ten Thousand Dollars (\$10,000) for each day of each violations, including each day subsequent to the filing of this Complaint, pursuant to R.C. 3734.13(C).



**TWENTY-THIRD CLAIM FOR RELIEF**  
**Statutory Nuisance**

241. The State incorporates herein the allegations contained in paragraphs 1- 240.

242. R.C. 3767.02 provides that any person who uses, occupies, establishes, or conducts a nuisance, or aids therein, and the owner, agent, or lessee of any interest in the nuisance, together with the persons employed in or in control of any such nuisance by any such owner, agent, lessee, is guilty of maintaining a nuisance.

243. R.C. 3767.13(C) prohibits any person from corrupting or rendering unwholesome or impure a watercourse, stream, or water to the injury or prejudice of others.

244. Defendant, since at least 1995 and at other times yet unknown to Plaintiff, has corrupted and/or rendered unwholesome and/or impure Dicks Creek, the Great Miami River, and unnamed tributaries of Dicks Creek and the Great Miami River to the injury or prejudice of others and/or the public.

245. Defendant's actions as described in this count and the consequences thereof constitute a nuisance, as defined in R.C. 3767.01 and 3767.13, for which Plaintiff is entitled to injunctive relief pursuant to R.C. 3767.02 through 3767.06, and a tax from Defendant in an appropriate amount pursuant to R.C. 3767.08.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff, the State of Ohio respectfully requests that this Court:

A. Permanently enjoin Defendant to abate its nuisance, and permanently enjoin Defendant from causing a nuisance thereafter and to comply with the CAA and the CWA and with R.C. Chapters 3704 and 6111 and the regulations promulgated thereunder in the course of



any operations at its Facility;

B. Order Defendant to pay a civil penalty of \$25,000 per day per violation alleged in State Claims One through Four of this Complaint, including each day of violation subsequent to the filing of this action pursuant to R.C. 3704.06;

C. Order Defendant to pay a civil penalty of up to Twenty-Five Thousand (\$25,000) per day for each violation of the CAA occurring on or before January 30, 1997, and Twenty-Seven Thousand Five Hundred (\$27,500) per day for each violation of the CAA occurring on or after January 30, 1997.

D. Permanently enjoin Defendant, pursuant to R.C. Chapter 6111, to undertake all necessary investigations and to conduct all necessary remedial activities, which meet with the approval of Ohio EPA, to abate pollution and contamination resulting from unpermitted discharges from the Facility and other areas where seepage containing PCBs and other contaminants are located and/or migrated to; remove or immobilize such pollution; and eliminate or immobilize the source; and timely submit plans and reports to Ohio EPA relating to such necessary remedial activities.

E. Permanently enjoin Defendant from further violations of the CWA, R.C. Chapter 6111 and of any current and future NPDES permit and to compel Defendant to comply with R.C. Chapter 6111 and the rules adopted thereunder.

F. Enjoin Defendant to develop and implement a Best Management Practices (BMP) Plan to prevent spills of industrial waste, other wastes or pollutants from the Facility from reaching waters of the State and to prevent future spills or contaminated runoff at the Facility.



G. Pursuant to R.C. 6111.09, order Defendant to pay into the Treasury of the State of Ohio a civil penalty for violations of R.C. Chapter 6111 as described in State Claims Five through Thirteen of this Complaint in the amount of up to Ten Thousand Dollars (\$10,000) per day for each day of each violation plus up to ten thousand dollars (\$10,000) per day of each violation occurring subsequent to the filing of the Complaint.

H. Order Defendant to pay a civil penalty of up to Twenty-Five Thousand (\$25,000) per day for each violation of the CWA occurring on or before January 30, 1997, and Twenty-Seven Thousand Five Hundred (\$27,500) per day for each violation of the CWA occurring on or after January 30, 1997.

I. Preliminarily and permanently enjoin Defendant to comply with R.C. Chapter 3734 and the rules adopted thereunder.

J. Pursuant to R.C. 3734.13(D), order Defendant to pay into the Treasury of the State of Ohio a civil penalty for violations of R.C. Chapter 3734 as described in this Complaint, the hazardous waste violations alleged in State Claims Fourteen through Nineteen in the amount of up to Ten Thousand Dollars (\$10,000) per day for each day of each violation plus up to ten thousand dollars (\$10,000) per day of each violation occurring subsequent to the filing of the Complaint.

K. Require Defendant to pay all Court costs of this action.

L. Award the State of Ohio its costs and disbursements in this action.

M. Retain jurisdiction of this action for the purpose of making any order or decree which it may deem necessary at any time to carry out its judgment.

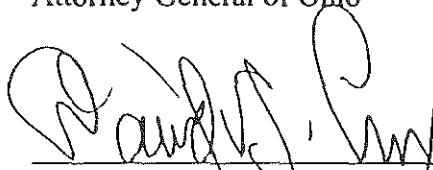




N. Grant all such further relief as the Court deems necessary, equitable or just.

Respectfully submitted,

Betty D. Montgomery  
Attorney General of Ohio

A handwritten signature in black ink, appearing to read "David G. Cox", is written over a horizontal line.

David G. Cox (0042724) (trial attorney)

Kimberly A. Rhoads (0061740)

Lori A. Massey (0047226)

Douglas A. Curran (0065750)

Assistant Attorneys General

Environmental Enforcement Section

30 East Broad Street, 25th Floor

Columbus, Ohio 43215-3428

Telephone: (614) 466-2766

Facsimile: (614) 644-1926

Counsel for Plaintiff State of Ohio



### Certificate of Service

**I hereby certify that a copy of the foregoing Intervenor State of Ohio's Complaint for Injunctive Relief and Civil Penalties will be served or otherwise delivered pursuant to Federal Rule of Civil Procedure 4 and was served by regular United States mail, postage prepaid, on June 30, 2000, upon:**

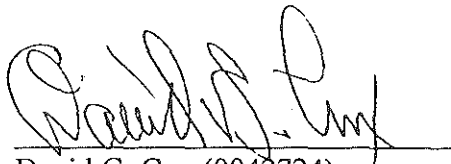
Christopher R. Schraff, Esq.  
J. Jeffrey McNealey, Esq.  
Porter, Wright, Morris & Arthur  
41 South High Street  
Columbus, Ohio 43215

Paul W. Casper, Jr., Esq.  
Frost & Jacobs  
201 East Fifth Street, Suite 2500  
Cincinnati, Ohio 45202-4182

Robert S. Guenther  
Kris P. Vezner  
United States Environmental Protection  
Agency  
Region V  
77 West Jackson Blvd. (C-14J)  
Chicago, Illinois 60604-3590

Robert W. Darnell  
Trial Attorney  
Environment and Natural Resources  
Division  
United States Department of Justice  
P.O. Box 7611  
Ben Franklin Station  
Washington, D.C. 20044

Gerald K. Kaminski  
Assistant United States Attorney  
Room 220  
Potter Stewart Federal Courthouse  
5<sup>th</sup> and Walnut Streets  
Cincinnati, Ohio 45202

  
\_\_\_\_\_  
David G. Cox (0042724)  
Trial Attorney



NPDES permit no. 11D00001\*BD (and its modification)

at least:

- \*1 violation in February 1992 (outfall 613)
- \*1 violation in March 1992 (outfall 613)
- \*1 violation in April 1992 (outfall 613)

at least:

- \*1 violation in February 1989 (outfall 613)
- \*1 violation in November 1989 (outfall 613)
- \*1 violation in January 1990 (outfall 613)
- \*1 violation in April 1990 (outfall 613)
- \*1 violation in November 1990 (outfall 613)
- \*1 violation in January 1991 (outfall 613)
- \*1 violation in May 1991 (outfall 613)
- \*1 violation in August 1991 (outfall 613)
- \*1 violation in February 1992 (outfall 613)

at least:

- \*1 violation in November 1989 (outfall 613)
- \*1 violation in April 1990 (outfall 613)
- \*1 violation in November 1990 (outfall 613)
- \*1 violation in January 1991 (outfall 613)
- \*1 violation in May 1991 (outfall 613)



(c) Residue, total nonfilterable (suspended solids)

**Daily violations**

at least:      \*1 violation in March 1991 (outfall 631)  
                  \*1 violation in June 1991 (outfall 642)  
                  \*1 violation in August 1991 (outfall 642)  
                  \*1 violation in October 1991 (outfall 642)  
                  \*1 violation in February 1992 (outfall 642)  
                  \*1 violation in August 1992 (outfall 642)

**Thirty-Day (monthly average) violations**

at least:      \*1 violation in March 1991 (outfall 631)  
                  \*1 violation in June 1991 (outfall 642)  
                  \*1 violation in August 1991 (outfall 642)  
                  \*1 violation in October 1991 (outfall 642)  
                  \*1 violation in February 1992 (outfall 642)  
                  \*1 violation in August 1992 (outfall 642)

(d) Zinc

**Daily violations**

at least:      \*1 violation in February 1990 (outfall 001)  
                  \*1 violation in May 1990 (outfall 001)  
                  \*2 violations in June 1990 (outfall 631)  
                  \*1 violation in October 1990 (outfall 001)  
                  \*1 violation in March 1991 (outfall 631)  
                  \*1 violation in April 1991 (outfall 642)  
                  \*1 violation in May 1991 (outfall 005)  
                  \*1 violation in July 1991 (outfall 005)  
                  \*1 violation in August 1991 (outfall 642)  
                  \*1 violation in September 1991 (outfall 642)  
                  \*2 violations in November 1991 (outfall 642)  
                  \*1 violation in February 1992 (outfall 642)  
                  \*1 violation in March 1992 (outfall 001)

**Thirty-Day (monthly average) violations**

at least:      \*1 violation in September 1988 (outfall 005)





- \*1 violation in January 1989 (outfall 001)
- \*1 violation in February 1989 (outfall 001)
- \*1 violation in February 1990 (outfall 001)
- \*1 violation in May 1990 (outfall 001)
- \*1 violation in June 1990 (outfall 631)
- \*1 violation in July 1990 (outfall 631)
- \*1 violation in September 1990 (outfall 005)
- \*1 violation in October 1990 (outfall 001)
- \*1 violation in November 1990 (outfall 001)
- \*1 violation in December 1990 (outfall 005)
- \*2 violations in January 1991 (outfalls 001 & 005)
- \*1 violation in February 1991 (outfall 001)
- \*1 violation in March 1991 (outfall 631)
- \*1 violation in April 1991 (outfall 642)
- \*1 violation in May 1991 (outfall 005)
- \*1 violation in June 1991 (outfall 005)
- \*1 violation in July 1991 (outfall 005)
- \*2 violations in August 1991 (outfall 642)
- \*1 violation in September 1991 (outfall 642)
- \*1 violation in November 1991 (outfall 642)
- \*1 violation in February 1992 (outfall 642)

(e) Nickel

**Daily violations**

at least:      \*1 violation in April 1991 (outfall 642)  
                 \*1 violation in August 1991 (outfall 642)

**Thirty-Day (monthly average) violations**

at least:      \*1 violation in April 1991 (outfall 642)  
                 \*1 violation in August 1991 (outfall 642)

(f) Lead

**Daily violations**

at least:      \*1 violation in March 1991 (outfall 631)

**Thirty-Day (monthly average) violations**

at least:      \*1 violation in March 1991 (outfall 631)

(g) Excessive pH



**Daily violations**

- at least:
- \*2 violations in July 1988 (outfall 613 and 003)
  - \*1 violation in November 1988 (outfall 002)
  - \*3 violations in January 1989 (1 at 613; 2 at 002)
  - \*1 violation in July 1989 (outfall 613)
  - \*1 violation in November 1989 (outfall 613)
  - \*1 violation in March 1999 (outfall 002)

**NPDES permit no. IID00001\*DD (and its modification)**

**(a) Ammonia**

**Thirty-Day (monthly average) violations**

- at least:
- \*1 violation in September 1994 (outfall 613)
  - \*1 violation in October 1994 (outfall 613)
  - \*1 violation in January 1995 (outfall 613)
  - \*1 violation in July 1995 (outfall 613)
  - \*1 violation in August 1995 (outfall 613)
  - \*1 violation in September 1995 (outfall 613)

**(b) Phenolics**

**Daily violations**

- at least:
- \*3 violations in April 1993 (outfall 613)
  - \*1 violation in May 1993 (outfall 613)
  - \*1 violation in February 1994 (outfall 613)
  - \*1 violation in March 1994 (outfall 613)
  - \*1 violation in May 1994 (outfall 613)
  - \*1 violation in June 1994 (outfall 613)
  - \*1 violation in December 1994 (outfall 613)
  - \*1 violation in February 1995 (outfall 613)
  - \*1 violation in August 1995 (outfall 613)

**Thirty-Day (monthly average) violations**

- at least:
- \*1 violation in April 1993 (outfall 613)
  - \*1 violation in May 1993 (outfall 613)
  - \*1 violation in March 1994 (outfall 613)
  - \*1 violation in December 1994 (outfall 613)
  - \*1 violation in February 1995 (outfall 613)

**(c) Residue, total nonfilterable (suspended solids)**

**Daily violations**



at least:       \*1 violation in November 1993 (outfall 642)  
                  \*1 violation in February 1994 (outfall 642)  
                  \*1 violation in December 1996 (outfall 005)

**Thirty-Day (monthly average) violations**

at least:       \*1 violation in November 1993 (outfall 642)  
                  \*1 violation in February 1994 (outfall 642)  
                  \*1 violation in December 1996 (outfall 005)

**(d)    Zinc**

**Daily violations**

at least:       \*1 violation in April 1993 (outfall 642)  
                  \*1 violation in September 1994 (outfall 631)  
                  \*1 violation in November 1994 (outfall 631)  
                  \*1 violation in December 1994 (outfall 005)  
                  \*1 violation in January 1996 (outfall 642)  
                  \*1 violation in December 1996 (outfall 005)  
                  \*1 violation in October 1997 (outfall 642)

**Thirty-Day (monthly average) violations**

at least:       \*1 violation in September 1994 (outfall 631)  
                  \*1 violation in October 1994 (outfall 631)  
                  \*1 violation in November 1994 (outfall 631)  
                  \*1 violation in December 1994 (outfall 631)  
                  \*1 violation in November 1995 (outfall 005)  
                  \*2 violations in January 1996 (outfalls 005,642)  
                  \*2 violations in December 1996 (outfall 005)  
                  \*1 violation in January 1997 (outfall 005)

**(e)    Nickel**

**Daily violations**

at least:       \*1 violation in April 1995 (outfall 642)

**Thirty-Day (monthly average) violations**

at least:       \*1 violation in April 1995 (outfall 642)

**(f)    Excessive pH**

**Daily violations**

at least:       \*1 violation in June 1993 (outfall 002)



- \*1 violation in September 1994 (outfall 003)
- \*1 violation in September 1995 (outfall 015)
- \*2 violations in December 1995 (outfall 002)

(g) Free cyanide

**Daily violations**

- at least:
- \*1 violation in December 1992 (outfall 011)
  - \*1 violation in February 1994 (outfall 002)
  - \*1 violation in June 1995 (outfall 002)
  - \*1 violation in July 1995 (outfall 011)
  - \*3 violation in October 1995 (outfall 011)
  - \*2 violations in December 1995 (outfall 011)
  - \*1 violation in June 1996 (outfall 011)
  - \*1 violation in August 1996 (outfall 011)
  - \*1 violation in October 1996 (outfall 011)
  - \*2 violations in November 1996 (outfall 011)
  - \*1 violation in December 1996 (outfall 011)
  - \*1 violation in January 1997 (outfall 015)

**Thirty-Day (monthly average) violations**

- at least:
- \*1 violation in December 1992 (outfall 011)
  - \*1 violation in October 1995 (outfall 011)
  - \*1 violation in August 1996 (outfall 011)
  - \*1 violation in October 1996 (outfall 011)
  - \*1 violation in November 1996 (outfall 011)
  - \*1 violation in December 1996 (outfall 011)

(h) Total cyanide

**Daily violations**

- at least: \*1 violation in December 1995 (outfall 613)

(i) Oil and grease

**Daily violations**

- at least: \*1 violation in August 1993 (outfall 011)





(j) Flow rate

Daily violations

at least:       \*4 violations in April 1993 (outfall 642)  
                  \*3 violations in May 1994 (outfall 642)  
                  \*3 violations in July 1995 (outfall 642)  
                  \*8 violations in September 1995 (outfall 642)

NPDES permit no. 11D00001\*FD

(a) Ammonia

Daily violations

at least:       \*9 violations in October 1998 (outfall 002)

(b) Zinc

Daily violations

at least:       \*1 violation in February 1998 (outfall 642)  
                  \*1 violation in June 1998 (outfall 015)

Thirty-Day (monthly average) violations

At least:       \*1 violation in February 1998 (outfall 642)

(c) Free Cyanide

Daily violations

at least:       \*1 violation in January 1998 (outfall 011)  
                  \*2 violations in August 1998 (outfall 011)  
                  \*3 violations in September 1998 (outfall 011)

(d) Excessive pH

Daily violations

at least:       \*1 violation in March 1999 (outfall 002)



**ATTACHMENT B**  
**SPILL EVENT TABLE**

OEPA ID #	DATE	SPILL DESCRIPTION	AMOUNT SPILLED & WATERWAY AFFECTED
8812-09-4034	11/15/88 to 12/1/88	An unknown amount of lube oil was left over in cooling tower as a result of a spill on 11/15/88. The left over oil blew down (spilled) into a lagoon on 12/1/88.	Unknown amount to lagoon outfall to Dicks Creek (light sheen was observed)
8905-09-1813	5/22/89	Waste water containing organics and cyanide spilled as a result of pump failure.	2,000 gallons outfall to Dicks Creek
8909-09-3631	9/15/89	A twenty foot section of pipe from pit to treatment plant was shut down because of a crack in the pipe. The pit overflowed spilling zinc.	Unknown amount to Great Miami River
8911-09-4449	11/21/89	During the emergency replacement of flange at treatment station 614, pumps were shut down. A pit overflowed spilling wastewater.	6,000 gallons to Great Miami River
9001-09-0256	1/18/90	Due to equipment failure, "flushing liquor," containing ammonia hydroxide, benzene, phenolics, zinc, lead, selenium spilled through storm sewer to Dicks Creek.	30,000 gallons spilled total, only 8,000 gallons spilled to storm sewer to outfall to Dicks Creek
9008-09-4112	8/22/90	Waste acid went to the 614 treatment facility but was lost there. The waste acid spilled into the Great Miami River.	5, 000-6,000 gallons to Great Miami River
9103-09-0715	3/8/91	Due to equipment failure, wastewater was spilled into Dicks Creek.	Unknown amount to outfall 003 to Dicks Creek



9107-09-2782	7/9/91	A process line was shut down for repairs. The remaining decanters could not handle the flow of the system and "flushing liquor" overflowed and spilled.	>25,000 gallons to storm sewers & lagoon to outfall 002 to Dicks Creek
9111-09-4723	11/6/91	A fire hose ruptured allowing water to enter oil recovery pit. The waste oil pit overflowed and spilled.	500 - 1,000 gallons to storm sewer to outfall 001 to Great Miami River
9206-09-2729	6/27/92	"Flushing liquor" overflowed and spilled for 1.5 hours due to damaged equipment.	Unknown Amount to storm sewer to outfall 003 to Dicks Creek
9206-09-2760	6/29/92	Tributletin oxide tainted water was lost and spilled. Tributletin oxide is a microbiocide used to kill bacteria on the nozzles in the wastewater treatment plant.	Approximately 1 million gallons  to outfall 005 to Dicks Creek 10,811 fish were killed
9207-09-2910	7/9/92	Spill resulted from a bypass caused by a pump failure. Wastewater spilled into Dicks Creek.	Unknown amount outfall to Dicks Creek
9212-09-5291	12/19/92	Spill resulted from a bypass caused by a tank overflow. Rinse water spilled into Dicks Creek.	400 gallons to outfall 004 to Dicks Creek
9212-09-5340	12/25/92	Wastewater spilled due to a bypass.	Unknown amount to storm sewer
9212-09-5339	12/27/92	Wastewater spilled due to a bypass.	Unknown amount to storm sewer
9302-09-0564	2/15/93	Spent pickle liquor was spilled to a ditch.	4,000 gallons to drainage ditch
9304-09-1520	4/23/93	Wastewater spilled when pipe to wastewater treatment plant was being repaired.	Unknown amount to Great Miami River
9305-09-2007	5-22-93	Sulfuric acid spilled to plant sewers during power outage and north terminal treatment bypassed.	8,300 gallons to outfall to Great Miami River



9306-09-2583	6/26/93	Sulfuric acid spilled because of a leak in drain valve on the sulfuric acid tank in coke plant.	Unknown amount to outfall 002 to Dicks Creek
9308-09-3358	8/11/93	Pickle liquor spilled when transferring from AGST to a tank truck. Pickle liquor entered storm sewer.	Approximately 100 gallons to storm sewer to ditch\
9408-09-3569	8/9/94	Untreated contact cooling water was diverted to a sump area due to a malfunction in the system. This water was then pumped from the sump through a tanker to a storm drain which empties into Outfall 003 to Dicks Creek.	At least 100,000 gallons to outfall 003 to Dicks Creek
9408-09-3648	8/13/94	Sodium hydroxide/noncontact cooling water spilled into storm drain overnight.	10-15 gallons to storm sewer outfall to Dicks Creek
9507-09-3129	7/26/95	Flushing liquor from the coke operation overflowed from a overhead reservoir due to a tar build-up in the lines. The spill went to a containment pad which overflowed and discharged to a sump which pumped the liquor to the storm sewer and into outfall 003.	9,200 gallons to storm sewer to outfall 003 to Dicks Creek 12,713 fish were killed
9509-09-3781	9/6/95	Dark red wastewater/storm water (iron ore) was discharged, reason unknown.	Unknown amount to lagoon to outfall 003 to Dicks Creek
9512-09-5037	12/21/95	Caustic sodium hydroxide leaked from above-ground tank in coke plant area.	50 gallons to storm sewer outfall to Dicks Creek
9603-09-0872	3/7/96	Spill resulted from storm water runoff or scouring of outfall pipe because of high river levels. Oil/hydrocarbon sheen was observed.	Unknown amount to outfall 011 to Great Miami River





9703-09-1088	3/20/97	Spill resulted because of quenching water bypass due to break in line.	Unknown amount to storm sewer to outfall 002
9704-09-1534	4/22/97	Spent Pickle Liquor spill	Unknown amount to outfall 004 to Dicks Creek at outfall 002
9710-09-4042	10/4/97	White foamy substance discharging from outfall 005; substance and reason for discharge are unknown.	Unknown amount to outfall 005 to Dicks Creek
9711-09-4463	11/11/97	Valve was opened in cooling tower basement allowing oil to spill into Dicks Creek.	Approximately 50 gallons to outfall 015 to outfall 003 to Dicks Creek
9711-09-4552	11/19/97	Tank was overfilled allowing zinc sulfate (10% solution) to spill.	Approximately 50 gallons to outfall 004 to Dicks Creek
	1/5/98	Discharge of foam	Significant amount witnessed by OEPA personnel to outfall 004 to Dicks Creek
9801-09-0170	1/13/98	A cracked pipe at flange outside of electrogalvanizing line resulted in the bypassing/spill (on 1/12/98) of untreated acid and caustic rinse water/wastewater.	Approximately 200 gallons to storm sewer to outfall 004 to Dicks Creek
9802-09-0551	2/14/98	Oil leak from outside storage	40 gallons to outfall 015 to Dicks Creek
	3/16/98	Unknown discharge caused fish kill downstream of outfall. Fish above outfall were not affected.	Unknown amount to outfall 015 to Dicks Creek 351 fish killed
9903-09-1092	3/29/99	Sulfuric Acid leak from above ground & overhead Q-piping because a valve was left open on coke plant.	Unknown amount to Dicks Creek

ADDITIONAL OCCURENCES	DATE
PCB seeps	1997, 1998
Outfall 009 -- landfill discharge	1987-1997



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:	)	DOCKET NO.
	)	
AK STEEL CORPORATION	)	PROCEEDING UNDER SECTION
1801 CRAWFORD AVENUE	)	7003 OF THE RESOURCE
MIDDLETOWN, OHIO 45043	)	CONSERVATION AND RECOVERY
	)	ACT, 42 U.S.C. § 6973
EPA I.D. NO. OHD 004 234 480	)	
	)	
RESPONDENT	)	
	)	

ADMINISTRATIVE ORDER

I. JURISDICTION

1. The Chief of the Enforcement and Compliance Assurance Branch, in the Waste, Pesticides and Toxics Division of the U.S. EPA Region 5, issues this Order under section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973. The Chief possesses this authority under a series of delegations originating with the Administrator of U.S. EPA.

2. The Chief issues this Order to AK Steel Corporation ("AK Steel"), who owns and operates an integrated steel production facility located at 1801 Crawford Avenue, Middletown, Ohio 45043. AK Steel's facility is located adjacent to Dick's Creek and an unnamed tributary to Dick's Creek, also known as the landfill tributary or the Monroe ditch.

II. DEFINITIONS

3. This Order incorporates the definitions found in the

AK5 040922

RCRA statute, 42 U.S.C. §§ 6901-6992k, and regulations promulgated under RCRA, unless otherwise specified.

4. "Seep" means a visible discharge of water emanating from the ground or an embankment, and discharging to surface waters.

### III. FINDINGS OF FACT

5. U.S. EPA bases its factual findings upon information known to U.S. EPA at the time of issuance of this Order.

6. AK Steel is the current owner and operator of a fully integrated steel production facility located at 1801 Crawford Avenue, Middletown, Ohio 45043 (the "Facility").

7. AK Steel has owned and operated the Facility at all times relevant to this action.

8. Prior to 1989, Armco, Inc. owned the Facility. In 1989, Armco, Inc. transferred the Facility (and associated liabilities) to Armco Steel Company, L.P. In 1994, Armco Steel Company, L.P. transferred the Facility (and associated liabilities) to AK Steel Corporation.

9. AK Steel's Facility covers an area in Middletown, Ohio of about 4 square miles.

10. The Facility is separated into five general areas, known as the north plant, the south plant, the melt plant, the coil production area, and the slag processing area. See Exhibit

1: Layout of Facility - Armco Middletown Works.

11. AK Steel has at various times, handled, managed or disposed of solid wastes from its production processes within the slag processing area.

12. The slag processing area contains six closed landfills, one operating landfill, numerous slag piles, and various operations for processing slag and other residuals from steel production. See Exhibit 2: Approximate Location of SWMUs and AOCs at the Armco Plant, Middletown, Ohio.

13. The slag processing area borders Dick's Creek, which runs from east to west along the north boundary, and an unnamed tributary, also known as the landfill tributary or Monroe Ditch, which runs from south to north through the slag processing area.

14. Exhibit 3 is an aerial photograph of the slag processing area which also shows the general locations of Dick's Creek, the landfill tributary, several of the closed landfills, a kish pot quench area, and a seep area adjacent to the landfill tributary.

15. According to the Monroe Ditch Investigation First Interim Report (July 1999) prepared by ARCADIS, Geraghty and Miller for AK Steel, water recharge at the steel slag processing and kish pot operation areas heavily influences local water flow

in the perched zone. Kish pot water quenching activities started in April 1997. Exhibit 3 shows the general locations of these areas.

16. Until January, 2000, International Mill Services, Inc. under contract to AK Steel, operated the slag processing area activities and kish pot quenching operations.

17. Beginning in January, 2000, Olympic Mill Services, a division of Tube City, Inc., manages the kish pot operation and slag processing activities under contract to AK Steel.

18. From April 1997 through about January 2000, the kish pot quenching operation used large quantities of water which ran off the kish pot quench stands and percolated or infiltrated into the ground in the slag processing area.

19. Beginning around February 2000, AK Steel began to use an indoor air-cooling operation for the kish which reduced water usage, but which still uses large quantities of water.

20. On October 31, 1997, during work in Dick's Creek, Ohio Environmental Protection Agency ("OEPA") staff observed a white substance coming from the landfill tributary flowing into Dick's Creek. OEPA sampled the substance, and sent it for laboratory analysis. The water contained two arochlors of polychlorinated biphenyls (PCBs) at levels of 0.873 micrograms per liter ( $\mu\text{g/L}$ )

(PCB-1248) and 0.290  $\mu\text{g/L}$  (PCB-1260), which equals a level of 1.163  $\mu\text{g/L}$  total PCBs.

21. On November 3, 1997, OEPA staff traced the source of the white substance back to a seep observed along the eastern bank of the landfill tributary, emanating from the slag processing area. OEPA staff observed the seep discharging into the landfill tributary, and upon entering the tributary, it turned the water in the tributary white.

22. OEPA sampled the water from the seep and landfill tributary on November 4, 1997, and determined by analysis that the waters contained PCBs. The results from the OEPA sampling event showed concentrations of 3.065  $\mu\text{g/L}$  PCBs at the seep location (east bank of tributary, discharging from the slag processing area), 2.702  $\mu\text{g/L}$  PCBs downstream of the seep location in the landfill tributary, and non-detect for PCBs at Todhunter Road (upstream of AK Steel).

23. The State of Ohio's water quality standard for PCBs in surface water is 0.00079  $\mu\text{g/L}$  (parts per billion) for human health, on a 30 day average. The water quality standard for aquatic life on a 30 day average is 0.001  $\mu\text{g/L}$ . (Reference, Ohio Administrative Code 3745-1-34, tables 34-1 and 34-4). The measured PCB concentrations in the tributary and seep exceeded

these standards by approximately 3,000 times.

24. Upon receiving the results, OEPA sent a letter to AK Steel, dated December 5, 1997, notifying it that the seep discharge into the landfill tributary violated Ohio Revised Code Chapter 6111.04 and must cease immediately.

25. From December 1997 through January 1998, AK Steel constructed a trench system to cut off the flow of PCB-contaminated waters from the seep, a sump to collect the water intercepted by the trench, and a treatment system for the collected water.

26. On November 10, 1998 OEPA received a report that a seep discharging to the landfill tributary had re-appeared. On November 12, 1998, OEPA conducted a follow up inspection of AK Steel's PCB trench and treatment system and surrounding areas. Staff from the OEPA observed another seep discharging to the landfill tributary from a lower elevation than the existing interception trench area.

27. OEPA sampled the seep on November 12, 1998 and the results showed the water contained 14.2  $\mu\text{g/L}$  PCB-1248. OEPA notified AK Steel of its findings in a letter dated November 20, 1998 and informed AK Steel the discharge violated Ohio Revised Code 6111.04 and must cease immediately.



28. The concentrations of PCBs in the waters of the seep documented in November 1998 exceeded the Ohio water quality standards by several orders of magnitude.

29. During December 1998, AK Steel constructed another interceptor trench at a lower elevation and tied it into the existing sump, to cut off the second seep observed by OEPA staff. In addition, the upper trench was reportedly extended another 75 feet to intercept a third seep which had been identified further upstream.

30. In December 1995, OEPA collected nine sediment samples from Dick's Creek, the landfill tributary, and several AK Steel outfall channels. OEPA detected PCBs in six of the samples, ranging from 3.12 mg/kg total PCBs in Dick's Creek at Yankee Road, to 52.6 mg/kg total PCBs at the confluence of the landfill tributary with Dick's Creek.

31. OEPA staff noted in the field that the sample collected from AK Steel outfall channel 002, which contained total PCBs at 27.5 mg/kg upon chemical analysis, had "oil in sediment, dark" and "also several small dead fish in channel".

32. OEPA collected five additional sediment samples in 1995 from Dick's Creek upstream and downstream of AK Steel during its Biological and Water Quality Study of the Middle and Lower Great

Miami River and Tributaries, 1995 (see Volume II, Appendix Table A-6). These results showed concentrations of total PCBs in the sediments of Dick's Creek of 18.33 mg/kg at river mile 2.51 (Yankee Road), and 14.3 mg/kg at river mile 0.93 (Main Street near Excello).

33. OEPA field notes from this study noted that the samples taken from Dick's Creek at Yankee Road (river mile 2.51) and downstream of outfall 003 (river mile 3.0) "kicked up oil". Photographs of the samples collected in Dick's Creek (RM 2.51 and 3.0) during these sampling efforts also show the black, stained color of the sediments.

34. In 1996, AK Steel conducted sediment sampling in Dick's Creek, the landfill tributary, and other areas of the Facility.

35. AK Steel's data confirmed the presence of PCBs in sediment of Dick's Creek, the landfill tributary, and discharge channels associated with wastewater outfalls 002 and 003.

36. AK Steel sampled sediment in Dick's Creek downstream of the landfill tributary (west of the railroad bridge and east of Yankee Road), and detected PCBs at 44 mg/kg on June 17, 1996 and at 64 mg/kg on October 3, 1996.

37. AK Steel also sampled sediment in the landfill tributary (also known as the Monroe Ditch) at several locations.

Sediment samples taken adjacent to its landfills (approximately 100 feet upstream of the northward bend in the tributary and just upstream of the culvert pipe) on January 31, 1996 contained PCBs at 0.31 mg/kg and 0.36 mg/kg. A sediment sample taken from the landfill tributary immediately below a concrete revetment near the confluence with Dick's Creek on June 17, 1996 contained PCBs at 5.3 mg/kg. Additional sediment samples from the landfill tributary immediately downstream of the concrete basin near the confluence with Dick's Creek taken on June 17, 1996, also contained PCBs at concentrations of 0.6 mg/kg and 4.6 mg/kg (duplicate).

38. AK Steel also detected PCBs in the sediments of the channels of wastewater outfalls M002 and M003. AK Steel sampled the sediments of the M002 discharge channel on February 8, 1996 and the sediment samples contained 0.70 mg/kg PCBs. The sediment samples of the outfall M003 discharge channel contained 0.20 mg/kg and 0.21 mg/kg PCBs on January 31, 1996, and June 17, 1996, respectively.

39. In June 1996, U.S. EPA took a sediment sample of the landfill tributary at a location upstream of its confluence with Dick's Creek. This sample was split with Fore Testing Laboratories, Inc., an AK Steel contractor. The sample was

analyzed by U.S. EPA and found to contain PCBs (Arochlor 1248) at 1.2 mg/kg. For the reasons set forth in a U.S. EPA memorandum dated June 6, 2000 (and included in the Administrative Record for this Order), the accuracy of this analysis is in question. Accordingly, in issuing this Order, U.S. EPA has not in any way relied on this analysis. However, even if this analysis were considered reliable, the analysis would not change U.S. EPA's determination that conditions at the facility may present an imminent and substantial endangerment to health or the environment within the meaning of Section 7003(a) of RCRA, 42 U.S.C. § 6973(a) because of the heterogeneous nature of sediments, the location where the sample was taken, and the existence of all the other sample results.

40. In May 1997, OEPA conducted further sediment sampling in Dick's Creek, the landfill tributary and several AK Steel outfalls. OEPA detected total PCBs at 32.3 mg/kg in the landfill tributary sediment at its confluence with Dick's Creek, at 0.9 mg/kg in the sediment of AK Steel outfall channel 002, and 0.35 mg/kg in the sediment of AK Steel wastewater outfall channel 003.

41. OEPA staff noted in their field observations for the composite sample taken May 1997 from the landfill tributary at its mouth (the confluence with Dick's Creek): "oily sheen with

every draw", "strong odor", and "upon sample collection - petroleum odor/sheen".

42. In June 1999, OEPA, AK Steel and U.S. EPA split sediment samples of the landfill tributary to Dick's Creek. OEPA detected 13.97 mg/kg total PCBs in the sediments of the landfill tributary at its confluence with Dick's Creek, and 10.85 mg/kg total PCBs in the sediments of the landfill tributary adjacent to the interception trench system. AK Steel reported results of 3.49 mg/kg total PCBs in the sediments of the landfill tributary at its confluence with Dick's Creek, and 3.63 mg/kg total PCBs in the sediments of the landfill tributary adjacent to the treatment system. U.S. EPA detected 16.8 mg/kg total PCBs in the sediments at the mouth of the landfill tributary, and 16.6 mg/kg total PCBs in the sediments of the tributary adjacent to the treatment system.

43. U.S. EPA staff noted that the split sample collected from the Landfill tributary adjacent to the PCB treatment system/seep area was discolored dark brown and contained globules of oil upon mixing.

44. Sampling conducted by the OEPA in 1995 and 1997, AK Steel in 1996, and OEPA, U.S. EPA and AK Steel in 1999, demonstrates that PCBs are present in the sediments of the

landfill tributary and Dick's Creek.

45. Sediment quality can be evaluated by comparison to numerical guidelines derived by various methods.

46. Smith et. al. (1996) developed sediment quality assessment values using a weight of evidence approach. The values calculated by Smith include a threshold effects level (TEL) and a probable effects level (PEL). The TEL estimates the concentration of a chemical below which adverse biological effects only rarely occur. The PEL estimates the concentration of a chemical above which adverse biological effects frequently occur. The TEL and PELs are based on an evaluation of benthic community composition and toxicity test results using a large freshwater data set of toxic effects. Reference: Smith et. al., 1996, *A Preliminary Evaluation of Sediment Quality Assessment Values for Freshwater Ecosystems*, Journal of Great Lakes Research 22(3):624-638.

47. The TEL and PEL can be used as conservative screening values for evaluating the impacts of PCBs in sediments. For total PCBs, the TEL is 0.0341 ppm and the PEL is 0.277 ppm. The concentrations of PCBs in sediments in the vicinity of AK Steel exceed these conservative risk screening numbers by an order of

magnitude or more.

48. U.S. EPA Region 5 Ecological Screening Levels (1999) utilize a sediment ecological screening level of 0.0341 ppm PCBs. This level represents the most conservative risk screening value from a survey of promulgated guidelines in the Great Lakes region (including Canada). The concentrations of PCBs in the sediments of Dick's Creek and the landfill tributary exceed this value by over 100 times, based on the 1999 data.

49. Long et. al. (1995) also developed conservative ecological risk screening values for marine sediment. These measures are termed "effects range-low" and "effects range-median".

50. The effects range-low value calculated by Long (1995) for PCBs in marine sediment is 0.0227 mg/kg and the effects range-median value is 0.180 mg/kg. The concentrations of PCBs in the sediments of Dick's Creek and the landfill tributary exceed these conservative screening values.

51. Ingersoll (1996) also developed sediment effect concentrations to classify toxicity data for Great Lakes sediment samples tested with the amphipod *Hyaella azteca*. The "effect range median" and "probable effect level" represent

concentrations of a chemical in sediment above which adverse effects are frequently or always observed or predicted among most species.

52. The effect range median value calculated by Ingersoll (1996) for total PCBs is 0.730 mg/kg and the probable effect level is 0.240 mg/kg. The concentrations of PCBs in the sediments of Dick's Creek and the landfill tributary exceed these conservative screening values.

53. The Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario (Persaud et. al., 1993) establishes screening level concentrations designed to estimate the highest concentration of a contaminant in sediment that approximately 95% of benthic infauna can tolerate. The "lowest effect level" or LEL is a level of contamination which a majority of benthic organisms can tolerate. Sediments at this level are considered clean to marginally contaminated. The "severe effect level" or SEL is a level at which pronounced disturbance of a sediment dwelling community is expected; the sediment concentration would be detrimental to a majority of benthic organisms. Sediments at this level are considered heavily contaminated.

54. The Ontario guidelines for PCBs are 0.070 mg/kg (LEL)



and 0.530 mg/kg (SEL). Sediments in Dick's Creek and the landfill tributary exceed these conservative benchmark values.

55. The historical sediment surveys results show varying concentrations of PCBs over time at the confluence of the landfill tributary with Dick's Creek. Sediments and associated contaminants are subject to downstream transport during strong flow events, such as floods, heavy rain and increased water discharges. Increased flow can cause scour of sediments, mobilization of particles and redeposition further downstream when the velocity of the water flow decreases and particles settle to the stream bottom. Therefore, the presence of PCBs in areas of Dick's Creek downstream of Yankee Road signifies possible historical downstream migration of the PCB contamination. Sediment depositional areas are also naturally heterogeneous or patchy, and dynamic water conditions affect the location of these areas over time.

56. However, AK Steel and OEPA have collected few samples downstream of the confluence of the landfill tributary in Dick's Creek to substantiate the movement of PCBs subsequent to the 1995 surveys by OEPA. According to data collected and analyzed by AK Steel in 1999, it detected PCBs in Dick's Creek at levels of 2.01 mg/kg at Main St. and 1.4 mg/kg at Yankee Rd. It is unknown if

PCBs related to or attributable to AK Steel have already reached the Great Miami River.

57. AK Steel has also detected PCBs in soils at the Facility. The 1999 Monroe Ditch Investigation report by Arcadis Geraghty and Miller reported that soils in the slag processing area contained up to 39.0 mg/kg PCBs in surface soils, and up to 288 mg/kg PCBs at one location at a depth of 6-8 feet below ground surface.

58. U.S. EPA Regions 3 and 9 have developed conservative human health-based risk screening values for PCBs in soil. The U.S. EPA Region 3 risk screening values ("risk-based concentrations") are 2.9 mg/kg PCBs for industrial soil and 0.32 mg/kg PCBs for residential soil. The U.S. EPA Region 9 risk screening values ("preliminary remedial goals") are 1 mg/kg PCBs for industrial sites and 0.22 mg/kg PCBs for a residential scenario. U.S. EPA Region 5 risk policy follows the Region 9 preliminary remedial goals as generic risk screening values.

59. The concentrations of PCBs in soils at the AK Steel Facility exceed U.S. EPA's conservative human health-based risk screening levels.

60. The removal of these sources of PCBs will decrease the potential for continued PCB transport by precipitation and ground

water flow towards the landfill tributary and Dick's Creek.

61. Fish tissue samples collected from Dick's Creek in the vicinity or downstream of AK Steel also contain concentrations of PCBs.

62. OEPA conducted fish sampling on August 5, 1996, in Dick's Creek and measured PCBs in a channel catfish fillet at 0.620 mg/kg, and in a common carp fillet at 0.220 mg/kg.

63. OEPA also measured PCBs in fish collected from Dick's Creek during a January 7, 1998 survey. It detected total PCBs in a channel catfish fillet at 0.307 mg/kg, white crappie fillet at 4.95 mg/kg, white sucker fillet at 4.19 mg/kg, and a carp fillet at 26.5 mg/kg.

64. U.S. EPA Region 3 derived a risk-based concentration of 0.0016 mg/kg in fish tissue (equates to a lifetime cancer risk of  $1 \times 10^{-6}$ ). Other U.S. EPA Regions have not developed similar screening values for fish ingestion. However, U.S. EPA recommends no fish consumption when PCB concentrations in fish tissue exceed 0.097 mg/kg, which is based upon a maximum acceptable cancer risk level of  $1 \times 10^{-5}$  over a 70 year lifetime. Reference: U.S. EPA Fact Sheet, 1999.

65. The concentrations of PCBs in fish obtained from Dick's Creek exceed U.S. EPA's risk-based screening concentration and

monthly fish consumption limit.

66. The United States Food and Drug Administration tolerance level for PCBs in all fish is 2 mg/kg. Reference: 40 C.F.R. § 109.30.

67. The concentration of PCBs in the carp collected from Dick's Creek in 1998 exceeds the FDA limit by over an order of magnitude.

68. Therefore, the bioaccumulation of PCBs into fish tissue due to the known water quality and sediment contamination poses a potential unacceptable risk to human receptors.

69. U.S. EPA calculated the risk associated with consuming fish contaminated with a maximum of 26.5 ppm PCBs using standard U.S. EPA equations and exposure factors. Under a reasonable maximum exposure scenario, the probability of developing cancer exceeded four persons in one thousand ( $4.4 \times 10^{-3}$ ). The U.S. EPA target acceptable risk level is one person in one hundred thousand ( $1 \times 10^{-5}$ ).

70. PCB exposure corresponds with a wide array of adverse health effects in experimental animals including toxic effects to the liver, gastrointestinal system, blood, skin, endocrine system, immune system, nervous system, and reproductive system. In addition, research studies have reported developmental effects

and liver cancer associated with PCB exposure. Research has documented skin rashes and a severe form of acne in humans due to PCB exposure. Reference: U.S. EPA Fact Sheet, PCBs Update: Impact on Fish Advisories, EPA-823-F-99-019, September 1999.

71. PCBs have a very low solubility in water and low volatility and these non-polar compounds will preferentially absorb to particles. Therefore, most PCBs are contained in sediments that serve as an environmental reservoir which may continue to release PCBs over a long period of time. Furthermore, PCBs as well as most other non-polar contaminants are associated with and more likely to preferentially partition to fine-grained sediments, especially those containing oils or other petroleum products. In addition, PCBs are highly fat soluble and are rapidly accumulated by aquatic organisms and bioaccumulated through the aquatic food chain. Concentrations of PCBs in aquatic organisms may be 2000 to more than 1 million times higher than the concentrations found in the surrounding waters. Reference: U.S. EPA Fact Sheet, 1999.

72. Sensitive subpopulations such as pregnant women, infants, and children may be more susceptible to PCBs. Increased accumulation of PCBs in the body may occur because of under-developed enzymatic systems. Breast-fed infants may have an

increased risk because of bioconcentration of PCBs in breast milk and high intake rates relative to body weights. Reference: U.S. EPA Fact Sheet, 1999.

73. According to the Ohio Department of Health, years of consumption of fish highly contaminated with PCBs may cause health problems that range from slow development in children to cancer. Research also associates long-term skin contact with PCBs with cancer. Reference: OEPA News Release, December 30, 1997.

74. According to the U.S. Public Health Service, the Agency for Toxic Substances and Disease Registry, the U.S. Department of Health and Human Services and the U.S. EPA, human health studies indicate that (1) PCB exposure may disrupt reproductive function, (2) *in utero* exposure to PCBs causes neurobehavioral and developmental deficits to occur in newborns and continues through school-aged children, (3) other systemic effects are associated with elevated serum levels of PCBs, and (4) increased cancer risks are associated with PCB exposures. Reference: Public Health Implications of Exposure to PCBs, 1999.

75. Researchers at Wright State University, from the laboratory of G. Allen Burton, Ph.D., have also documented elevated levels of PCBs in Dick's Creek in independent studies of

bioaccumulation and toxicity to two test organisms (aquatic worm and amphipod).

76. In 1996, Wright State University researchers measured 0.466 mg/kg PCBs in Dick's Creek sediments near AK Steel.

77. In 1998, Wright State University researchers measured 33.210 mg/kg PCBs in the sediments of Dick's Creek near the landfill tributary, 2.637 mg/kg PCBs near the USGS station (vicinity of Yankee Road), and 0.716 mg/kg PCBs near the Amanda Elementary School.

78. Preliminary research results from Wright State University show that two aquatic organisms (*Lumbriculus variegatus* and *Hyalella azteca*) exposed to the sediments of Dick's Creek cannot survive for more than a week, with deaths most often occurring during the first 48 hours of sediment exposure.

79. Personnel from Wright State University have also observed elementary school to high school age children fishing, swimming, wading or playing in and around all of their usual sampling locations in Dick's Creek. Wright State staff also noted a railroad bridge immediately downstream of the convergence of the landfill tributary and Dick's Creek was a popular

gathering area for children and adults. They observed footprints in the vicinity of the railroad bridge, with visible pooling of oil sheens.

80. Newspaper articles published in the Dayton Daily News (January 17, 1999) also report that it is not uncommon in the summer to see children fishing and playing in Dick's Creek.

81. Approximately 40,000 people live within a 4 miles radius of the facility, based on estimates from a USGS topographical map (Reference: PA/VSI, 1992). Amanda Elementary School, 1215 Oxford State Road, abuts Dicks Creek downstream of the AK Steel facility, and access to the creek from the school is unrestricted.

82. In July 1999, AK Steel submitted a report on the possible sources of the PCBs in the seeps, to OEPA and U.S. EPA. ARCADIS Geraghty and Miller conducted the study and issued their findings in a report entitled *Monroe Ditch Investigation First Interim Report*, dated July 1999.

83. The report concluded that the start-up of the kish pot process in April 1997 heavily impacted water flow in the slag deposits within the perched (water table) zone of the slag processing area.



84. The report further concluded that this water recharged the ground water and caused a flushing of remnant PCBs from historic, decommissioned solid waste management units along subsurface flow paths to the seeps, and in turn discharged the water to the landfill tributary.

85. The report also concluded that the PCBs seeping into the tributary adhered to the sediments of the landfill tributary downstream of the seeps, and to the sediments of Dick's Creek, both upstream and downstream of the mouth of the landfill tributary, at shallow depths.

86. Seeps emanating from property owned by AK Steel and identified by OEPA in November, 1997 prompted the Ohio Department of Health to issue a fish advisory for Dick's Creek warning people not to eat any fish from its waters.

87. The additional seep discovered by OEPA in November 1998 prompted OEPA to request the Middletown and Butler County Health Departments to post additional signs along Dick's Creek which state: "UNSAFE WATER, DO NOT SWIM, BATHE, DRINK OR FISH".

88. On February 10, 2000, representatives of U.S. EPA and OEPA toured AK Steel's facility, including the kish pot operations and interceptor trench and PCB treatment system located at the slag processing area.

89. On February 10, 2000, U.S. EPA staff observed large quantities of milky colored water draining down a hillside from the kish pot operation, and infiltrating into the ground. A sump/drain collected a portion of the runoff water and transported it via gravity to the main pump house for the slag processing area.

90. OEPA staff observed a similar discoloration of water when they identified the groundwater seeps adjacent to the landfill tributary in 1997 and 1998.

91. On May 11, 2000, representatives of U.S. EPA and OEPA conducted a visual survey of Dick's Creek from AK Steel Outfall 002 to Amanda Elementary School, and of the landfill tributary from its mouth to the site of the AK Steel PCB treatment system.

92. Based on the visual observations of the sediment by representatives of U.S. EPA on May 11, 2000, at 24 separate locations in Dick's Creek and the landfill tributary, the sediments at all locations appeared to be contaminated from the surface to a depth of at least 6 inches.

93. Based on the visual observations of the sediment by representatives of U.S. EPA on May 11, 2000, all locations in the landfill tributary appeared to be contaminated with oils and other organic compounds.

94. Based on the visual observations of the sediment by representatives of U.S. EPA on May 11, 2000, all locations in the landfill tributary appeared at least partially black in color, and had an organic odor.

95. Based on the visual and olfactory observations of the sediment by representatives of U.S. EPA on May 11, 2000, all locations in the landfill tributary appeared to be contaminated due to past releases of solid wastes from the slag processing area of AK Steel.

96. In June 1999, OEPA, AK Steel and U.S. EPA split sediment samples of the landfill tributary to Dick's Creek. The samples were analyzed for semi-volatile compounds, which include polycyclic aromatic hydrocarbons (PAHs), and other organic compounds. PAHs were detected in the sediment samples at the tributary adjacent to the treatment system, and in the sediment samples at the mouth of the landfill tributary. U.S. EPA detected 4.1 mg/kg total PAHs in the sediments at the mouth of the landfill tributary, and 82.6 mg/kg total PAHs in the sediments of the tributary adjacent to the treatment system. In particular, U.S. EPA detected 1.3 mg/kg fluoranthene in the sediments at the mouth of the landfill tributary, and 27.0 mg/kg fluoranthene in the sediments of the tributary adjacent to the

treatment system. No PAHs were detected in the U.S. EPA sample upstream of the AK Steel operations in the landfill tributary, at Todhunter Road, although OEPA sample results showed 6.92 mg/kg total PAHs from this location.

97. Based on the June 1999, U.S. EPA sampling results, 19 other semi-volatile compounds were detected in the sediments of the landfill tributary adjacent to the treatment system. The total estimated concentration of these tentatively identified or unknown organic compounds was 397.5 mg/kg.

98. Based on the June 1999, U.S. EPA sampling results, 20 other semi-volatile compounds were detected in the sediments of the landfill tributary at the mouth of the landfill tributary. The total estimated concentration of these tentatively identified or unknown organic compounds was 152.3 mg/kg.

99. The Ontario, Canada, Provincial Sediment Quality Guidelines for Polycyclic Aromatic Hydrocarbons (Persaud et. al., 1993) establish two levels of effect for total PAHs - lowest effect level and severe effect level. These levels are based on the long-term effects which contaminants may have on sediment dwelling organisms. The lowest effect level indicates a level of contamination which may have no effect on the majority of the sediment dwelling organisms. The sediment is considered to be

clean to marginally polluted. The severe effect level indicates the sediment is considered heavily polluted and likely to adversely affect the health of sediment dwelling organisms. For total PAH, the lowest effect level is 4 mg/kg and the severe effect level is 10,000 mg/kg organic carbon. Total PAH is the sum of 16 PAH compounds: acenaphthene, acenaphthylene, anthracene, benzo[k]fluoranthene, benzo[b]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene. The lowest effect level for fluoranthene is 0.750 mg/kg and the severe effect level is 1,020 mg/kg organic carbon.

100. The severe effect level values must be multiplied by the total organic carbon concentration (in percent, to a maximum of 10%) of a particular sediment to compare with bulk sediment sampling values. For example, the severe effect level for total PAH in a sediment sample that contains 2% total organic carbon is 200 mg/kg ( $10,000 \text{ mg/kg organic carbon} \times 0.02$ ) and the severe effect level for fluoranthene is 20.4 mg/kg ( $1,020 \text{ mg/kg organic carbon} \times 0.02$ ).

101. Based on the 1999 U.S. EPA sediment sampling results, the sediments in the landfill tributary adjacent to the PCB

treatment system and at the mouth of the tributary exceed the Ontario lowest effect level guideline for total PAH and fluoranthene.

102. Based on the 1999 U.S. EPA sediment sampling results, the sediments in the landfill tributary at the treatment system exceed the severe effect level for fluoranthene.

103. The sediments in the landfill tributary at the treatment system exceed both the lowest effect level and severe effect level (assuming TOC = 2%) based on the total tentatively identified compounds from the 1999 U.S. EPA sediment sampling results.

104. The U.S. EPA Region 5 ecological screening value for fluoranthene is 0.11 mg/kg. Based on the 1999 U.S. EPA sampling results, the sediments of the landfill tributary at the treatment system and at the mouth exceed this conservative risk value by an order of magnitude or more.

105. PAHs are a group of over 100 different chemicals that form during the incomplete burning of coal, oil and gas, garbage, or other organic substances. PAHs are usually found as a mixture containing two or more of these compounds, and are found in coal tar, crude oil, creosote, and roofing tar. Most PAHs do not dissolve easily in water. They adhere to solid particles and

settle to the bottoms of lakes or rivers (as sediments). In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.

106. Research has shown that mice exposed to high levels of a PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short-term and long-term exposure.

107. The U.S. Department of Health and Human Services has determined that some PAHs may reasonably be expected to be carcinogens. Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals exposed to contaminated air (lung cancer), ingested food containing PAHs (stomach cancer), or had PAHs applied to their skin (skin cancer). Reference: ATSDR Public Health Statement, Polycyclic Aromatic Hydrocarbons, 1996.

#### IV. CONCLUSIONS OF LAW

108. AK Steel is a "person", as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

109. AK Steel is the present owner and operator of the Facility.

110. AK Steel has handled, managed and disposed of solid wastes within the slag processing area at the Facility.

111. PCBs are classified as a hazardous constituent under 40 C.F.R. Part 261, Appendix VIII.

112. AK Steel's past and present handling, management and disposal of solid wastes within the slag processing area at the Facility may present an imminent and substantial endangerment to human health or the environment.

#### **V. DETERMINATIONS**

113. Based on the foregoing Findings of Fact and Conclusions of Law, and the administrative record incorporated here by reference, U.S. EPA determines that AK Steel's past and/or present handling, management and disposal of solid waste at the facility may present an imminent and substantial endangerment to health or the environment within the meaning of Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).

114. The actions required by this Order are necessary to protect public health and the environment.

#### **VI. PARTIES BOUND**

115. This Order applies to and binds AK Steel, its



officers, employees, agents, successors, lessees, assigns, contractors and consultants acting under or on behalf of AK Steel.

116. No change in ownership of any property covered by this Order alters AK Steel's obligations and responsibilities under this Order. AK Steel is responsible for any failure to comply with this Order, irrespective of its use of employees, agents, contractors or consultants to perform any tasks.

117. AK Steel must direct all contractors, subcontractors, laboratories, and consultants to conduct or monitor any portion of the work performed pursuant to this Order as necessary to meet the requirements of this Order.

118. In the event of any planned change in ownership or control of the facility, AK Steel must notify U.S. EPA in writing at least 30 calendar days in advance of such change and must provide a copy of this Order to the transferee-in-interest of the facility, prior to any agreement for transfer.

#### **VII. NOTICE TO THE STATE**

119. On May 25, 2000, U.S. EPA provided written notice of issuance of this Order to the State of Ohio pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).

#### VIII. ORDER

120. Based on the above and on other information contained in the administrative record for this Order, U.S. EPA has determined that the activities required by this Order are necessary to protect public health or the environment. U.S. EPA, therefore, orders AK Steel to implement the following actions and fully cooperate with U.S. EPA and its authorized representatives in carrying out the provisions of this Order within the time periods and in the manner prescribed herein:

- a. Within 30 days of the effective date of this Order, AK Steel must replace the pump in use at the kish pot area of the slag processing operations, which requires a constant flow to be primed, with a self-priming pump.
- b. Within 60 days of the effective date of this Order, AK Steel must submit a plan to investigate alternatives to minimize the influence of the kish pot operation on groundwater flow, and to install a permanent water recycle system at the kish cooling building.
- c. Within 180 days of the effective date of this Order, AK Steel must install and operate the permanent water recycle system.
- d. As of the effective date of this Order, AK Steel must

eliminate the seepage of groundwater contaminated with PCBs and/or other solid wastes to surface water of the United States in areas presently known. AK Steel must operate and maintain the current interception trench and water treatment system, and monitor its effectiveness, including filter condition and treated effluent water, at least weekly.

- e. As of the effective date of this Order, AK Steel must prevent any treated effluent water from the PCB water treatment system from entering surface waters unless authorized to do so under the Clean Water Act.
- f. As of the effective date of this Order, AK Steel must monitor surface water quality, at least monthly, for possible impacts from seepage at a minimum of four locations including adjacent to the known seep area, immediately downstream of the known seep area, at the confluence of the landfill tributary with Dick's Creek, and downstream in Dick's Creek at Yankee Road.
- g. Within 30 days of the effective date of this Order, AK Steel must develop and submit an inspection plan and checklist to inspect weekly, at a minimum, the west and east banks of the landfill tributary, the banks of

Dick's Creek adjacent to the closed landfills, and the drainage swales adjacent to closed landfill #1 for evidence of seepage, or impacts from seepage, to surface waters and sediments.

- h. Beginning 30 days after the effective date of this Order, AK Steel must begin carrying out the inspection plan, and must continue to inspect at least weekly until AK Steel eliminates and remediates the source of PCBs and other solid waste seepage. AK Steel must record these inspections in a log and immediately inform OEPA Southwest District Office staff if any seepage is detected.
- i. As of the effective date of this Order, AK Steel must eliminate seepage of PCBs or other solid wastes to waters of the United States in areas where it may reasonably occur in the future. If evidence of additional seepage is noted, AK Steel must conduct sampling to determine the effects of the seepage on surface waters and sediments.
- j. Within 30 days of the effective date of this Order, AK Steel must submit a plan to conduct an investigation of sediment and surface water quality in Dick's Creek due

to releases of solid waste from the facility ("Sediment Sampling Plan"). The investigation must delineate the nature and extent of contamination including, but not limited to, the presence of PCBs, PAHs, other semi-volatile compounds and metals in sediments and surface waters of Dick's Creek and the landfill tributary (i.e. from the confluence of Dick's Creek with the Great Miami River to upstream of AK Steel outfall 003, the drainage swales on the west side of closed landfill #1, discharge channels associated with outfalls 002 and 003, and any polishing or settling ponds associated with these outfalls).

- k. The Sediment Sampling Plan must describe the proposed sampling locations, the sampling and analytical methods, the constituents subject to sampling and analysis, a schedule for implementation, and a quality assurance/quality control (QA/QC) plan that follows the most recent U.S. EPA and OEPA approved QA/QC practices.
- l. The Sediment Sampling Plan must provide for collection and analysis of sediment core samples at the discrete intervals of 0-6 inches, 6-12 inches, 12-18 inches, and 18-24 inches in depth. Additional depths may be

necessary depending on initial results. AK Steel must also sample areas considered free of PCBs and PAHs to identify the nature and extent of sediment contamination in the surficial and deep sediments of the surrounding area - including upstream of the facility in Dick's Creek, and upstream and downstream of the confluence with Dick's Creek in the Great Miami River.

- m. AK Steel must prepare the Sediment Sampling Plan according to applicable U.S. EPA guidance documents including the RCRA Corrective Action Plan (OSWER Directive 9902.3-2A), in consultation with U.S. EPA and OEPA, and must obtain the approval of U.S. EPA prior to implementing the plan.
- n. AK Steel must notify U.S. EPA and OEPA no less than 7 days in advance of any sampling collection activities conducted under this Order.
- o. Within 45 days of U.S. EPA's approval of the Sediment Sampling Plan, AK Steel must implement and complete the Sediment Sampling Plan, and must submit a report ("Dick's Creek Sediment Report") containing the investigation results and a work plan to remove or

otherwise remediate the PCB and PAH contaminated sediments in the landfill tributary and Dick's Creek, such that AK Steel eliminates the threat of imminent and substantial endangerment to human health and the environment. This report must also address any conditions which may present an imminent and substantial endangerment to human health and the environment which become known by work conducted under the Order and are related to releases of solid wastes from the Facility.

- p. AK Steel must remove, properly dispose of, or take other appropriate actions for any contaminated sediments and adjacent river bank materials contaminated with levels of PCBs or PAHs posing an unacceptable risk, as determined by U.S. EPA, from the landfill tributary, Dick's Creek, the outfall channels and if necessary the drainage swale to the west of closed landfill #1.
- q. The initial default performance standard for remediation of the landfill tributary and Dick's Creek will be removal of all visibly contaminated sediments (i.e. usually fine-grained sediments which are stained

dark in color, contain oily residues and/or emit detectable petroleum odors) with analytical confirmation that acceptable residual concentrations have been achieved. Any final proposed remedial measures must be consistent with acceptable risk management and engineering practice, and will only supercede the default performance standard if approved by U.S. EPA.

- r. The Dick's Creek Sediment Report may include risk calculations which support AK Steel's proposed final remedial actions, including acceptable residual concentrations of contaminants, which will eliminate the unacceptable risk posed by the contaminated sediments and other solid wastes. Any risk assessment activities conducted by AK Steel must follow appropriate U.S. EPA guidance including, but not limited to: Risk Assessment Guidance for Superfund (RAGS), Volume 1 - Human Health Evaluation Manual, EPA/540/1-89/002, December, 1989; Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, EPA/540/R-97/006, June 1999; and Guidelines for



Ecological Risk Assessment, EPA/630/R-95/002F, April 1998.

- s. The Dick's Creek Sediment Report must also include a plan to conduct a comprehensive sediment sampling program to confirm the elimination of PCBs and PAHs from the sediments of the landfill tributary and Dick's Creek to acceptable levels. The confirmatory sediment sampling plan must describe the proposed sampling locations, the sampling and analytical methods, the constituents subject to sampling and analysis, a schedule for implementation, and a QA/QC plan.
- t. The Dick's Creek Sediment Report must also include a work plan and schedule for subsequent riparian restoration, bank mitigation and stream restoration activities (habitat restoration) such that the landfill tributary and Dick's Creek meet all applicable Ohio water use designations and biocriteria standards by December 31, 2002.
- u. AK Steel must implement the remedial measures proposed in the Dick's Creek Sediment Report upon U.S. EPA's approval, or approval with modifications.
- v. AK Steel must complete the initial sediment removal

actions or other necessary PCB and/or PAH abatement actions prior to December 31, 2000.

- w. Within 90 days after completion of the initial sediment removal or other necessary actions, AK Steel must prepare and submit a final report on its sediment remediation activities, identifying actions taken, quantities of materials removed and disposal locations for those materials.
- x. Within 60 days of the effective date of the Order, AK Steel must submit a work plan ("PCB Source Identification and Removal Plan") to identify, remove and properly dispose of all remnant sources of PCBs in soils from locations at the AK Steel facility which may be contributing to releases of PCBs to Dick's Creek, the landfill tributary, or pose an unacceptable risk to human health or the environment. AK Steel must base its actions on the results of the investigation conducted by Arcadis Geraghty and Miller (e.g. soil in vicinity of SS-01, BH-15b, BH-07, BH-08, etc.) as well as follow up investigation and characterization of potential source areas outside of the slag processing area.

- y. Upon approval by U.S. EPA, AK Steel must implement the PCB Source Identification and Removal Plan, and complete its activities by December 31, 2000.
- z. Within 60 days of the effective date of this Order, AK Steel must prepare and submit a plan to further characterize groundwater flows and identify potential paths for leachate ("Groundwater Plan"). The Groundwater Plan must provide for the installation of at least 3 additional groundwater monitoring well clusters to fully evaluate groundwater flow in the vicinity of the slag processing area. AK Steel must install these wells in both the perched and shallow aquifers. The well nests should be located: (1) to the west of the existing pump house, between it and monitoring well MDA02S; (2) 500 feet east of the cluster described in number 1; and (3) 500 feet east of the cluster described in number 2 (east of the pump house). The Groundwater Plan must evaluate the northern groundwater flow path towards Dick's Creek to determine if PCB contamination in the slag processing area has contributed to the PCB contamination in Dick's Creek upstream of the confluence with the landfill

tributary. In addition, the Groundwater Plan must evaluate the effectiveness of the current trench system to completely capture flows towards the landfill tributary or Dick's Creek, to prevent the discharge of PCBs to the environment.

- aa. Within 90 days of the effective date of this Order, AK Steel must submit a plan, including an implementation schedule, to rectify the high pH in groundwater in the slag processing area and prevent discharges in violation of state water quality standards. To the extent this flow currently emerges at the PCB treatment system, AK Steel must assess whether the practice of reuse of the effluent throughout the slag processing operations (e.g. dust control, etc.) (a) results in concentration of PCBs or other solid wastes in soil or other media at the site, or (b) poses a risk of runoff to any surface waters.
- bb. By March 1, 2001, AK Steel must prepare and submit a plan to sample and analyze fish tissue obtained from the Great Miami River (appropriate to AK's outfalls), Dick's Creek and its tributaries ("Fish Sampling Plan"). AK Steel must obtain OEPA's approval of the

Fish Sampling Plan prior to its implementation.

Sampling must occur every three years beginning in the summer of 2001 and continuing through 2010. The sampling efforts must evaluate the presence of any impacts from solid wastes, e.g., PCBs, PAHs and other semi-volatile compounds, and heavy metals.

cc. Within 90 days of the completion of each year's fish sampling work, AK must submit an annual evaluation report to OEPA and U.S. EPA.

dd. By March 1, 2001, AK Steel must submit a sampling and analysis plan to conduct in stream biological monitoring of the Great Miami River (appropriate to AK's outfalls), Dicks Creek and its tributaries ("Biological Monitoring Plan"). Upon approval of the Biological Monitoring Plan by OEPA, AK Steel must carry out the initial assessment beginning July 30, 2001, and every three years thereafter through the year 2010.

These activities must include:

1. evaluation of the attainment status of aquatic life uses and health of aquatic environment based on biological criteria provided by Ohio Adm. Code 3745-1-07, table 7-14 Index of Biotic Integrity

(IBI) (based on fish communities), the Modified Index of Well-Being (MIWB) (based on fish community health characteristics), Invertebrate Community Index (ICI) (based on macro invertebrate communities);

2. evaluation, simultaneously with each annual aquatic life attainment status evaluation, of the aquatic habitat of Dick's Creek in accordance with the Qualitative Habitat Evaluation Index (QHEI); and
3. submittal of annual evaluation reports to U.S. EPA and OEPA.

#### **IX. APPROVALS/DISAPPROVALS**

121. After review of any deliverable, plan, report or other item which AK Steel must submit for review and approval pursuant to this Order, U.S. EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct AK Steel to resubmit the document after incorporating U.S. EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by U.S. EPA," "EPA approval," or a similar term means

the actions described in clauses (a) or (b) of this Paragraph.

122. Upon approval or approval with modifications by U.S. EPA, AK Steel must take any action required by the plan, report or other item, as approved or modified by U.S. EPA.

123. Upon receipt of a notice of disapproval or a request for modification, AK Steel must, within seven days or a longer time as specified by U.S. EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report or other item for approval. Notwithstanding the notice of disapproval or approval with modifications, AK Steel must proceed, at the direction of U.S. EPA, to take any action required by any undisputed portions of the submission.

#### **X. FACILITY ACCESS**

124. AK Steel must permit U.S. EPA, OEPA and their authorized representatives full access to the Facility to oversee implementation of and determine compliance with this Order, as provided by Section 3007 of RCRA, 42 U.S.C. § 6927, or as otherwise provided by law.

#### **XI. GENERAL PROVISIONS**

125. During implementation of the Order, AK Steel must submit a monthly progress report by the 15<sup>th</sup> of each month describing all activities conducted pursuant to this Order during

the prior month as well as all sampling and monitoring results.

126. All plans and documents submitted under any section of this Order will, upon approval by U.S. EPA, be incorporated by reference into this Order.

127. AK Steel must obtain any permits or approvals necessary to perform work on or outside the manufacturing areas under applicable law and must submit timely applications and requests for any permits and approvals.

128. AK Steel must follow all applicable U.S. EPA or OEPA guidance documents in developing its plans or reports.

## **XII. QUALITY ASSURANCE**

129. AK Steel must use quality assurance, quality control, data validation, and chain of custody procedures of all data gathered under this Order in accordance with U.S. EPA SW-846, Third Edition, or any subsequent edition in effect.

130. AK Steel must, upon request of U.S. EPA or OEPA, provide for the analysis of samples submitted for quality assurance monitoring by the laboratory(ies) AK Steel selects to perform the analyses required by this Order.

131. AK Steel must make available to U.S. EPA and OEPA the results of all sampling and/or test of other data generated by AK Steel with respect to the implementation of the Order.



132. AK Steel must, at the request of U.S. EPA or OEPA, allow for split or duplicate samples of any samples collected pursuant to this Order.

#### **XIII. NOTICES**

133. AK Steel must submit a notice of its intent to comply with this Order within five days of the effective date.

134. Whenever under the terms of this Order, AK Steel must provide notice to U.S. EPA or OEPA, AK Steel must send the correspondence by certified mail or hand delivery to each of the following individuals at the addresses specified below. All correspondence must include a reference to the case caption.

AK Steel Project Manager  
Enforcement and Compliance Assurance Branch  
U.S. EPA, Region 5  
77 West Jackson Boulevard (DE-9J)  
Chicago, Illinois 60604

As to the State:

Supervisor  
Division of Hazardous Waste Management  
Ohio Environmental Protection Agency  
Southwest District Office  
401 East Fifth Street  
Dayton, Ohio 45402

#### **XIV. RESERVATION OF RIGHTS**

135. Nothing in this Order restricts U.S. EPA's authority to seek AK Steel's compliance with this Order and applicable laws

and regulations. U.S. EPA reserves the rights to bring an action to enforce the Order and to assess penalties under section 7003(b) of RCRA, 42 U.S.C. § 6973(b). This Order does not limit or waive any rights, remedies, powers or authorities of U.S. EPA or of any State or local agency. U.S. EPA is not liable for any damages resulting from actions commenced pursuant to this Order.

136. This Order will not affect or limit the obligation of AK Steel to comply with all applicable federal, state and local laws and regulations. This Order is not a determination of any issue related to any federal, state, or local permit, and AK Steel remains subject to all permitting requirements.

137. U.S. EPA may disapprove any work conducted pursuant to this Order, perform any portion of the work, and require AK Steel to perform tasks in addition to those identified in this Order.

138. U.S. EPA may consult with OEPA on any technical issues associated with implementation or conduct of the work required under this Order.

139. U.S. EPA may seek reimbursement of its costs to the fullest extent allowed by law.

140. The issuance of this Order is not a final agency action.

#### **XV. FAILURE TO COMPLY**

141. Pursuant to section 7003(b) of RCRA, and the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, 31 U.S.C. § 3701, and regulations codified at 40 C.F.R. § 19.4, any failure by AK Steel to comply with this Order will subject AK Steel to civil penalties not to exceed \$5,500 for each day of each failure to comply with this Order.

#### **XVI. OPPORTUNITY TO CONFER AND MODIFICATION**

142. AK Steel may confer with U.S. EPA concerning the terms and applicability of this Order. If AK Steel desires a conference, AK Steel must contact Robert S. Guenther, Associate Regional Counsel, U.S. EPA, Region 5, at 312-886-0566, within 5 days of the effective date of this Order, to schedule the conference to take place at the offices of the U.S. EPA in Chicago, IL, Monday thru Friday, 8 am to 5 pm, between July 10 and July 21, 2000. The purpose and scope of this conference will be limited to issues involving implementation of the work and any other response actions required by this Order, and the extent to which AK's intends to comply with the Order. The conference is not an evidentiary hearing and does not constitute an opportunity to challenge the Order.

143. If U.S. EPA determines that any element of this Order, including work to be performed or schedules, warrants modification after a conference, U.S. EPA will modify the Order in writing and issue a copy to AK Steel.

144. Except as otherwise provided in this Order, no modification to this Order will be effective until U.S. EPA issues it in writing.

**XVII. EFFECTIVE AND TERMINATION DATES**

145. This Order is effective immediately upon AK Steel's receipt of the original executed Order via certified mail, express mail, or immediately upon AK Steel's receipt of a copy of the executed order via facsimile, whichever comes first.

146. This Order terminates upon AK Steel's receipt of written notice from U.S. EPA that AK Steel has satisfactorily completed all requirements of this Order.

IT IS SO ORDERED:

For the United States Environmental Protection Agency, Region 5

Date: \_\_\_\_\_ By: \_\_\_\_\_  
Joseph M. Boyle, Chief  
Enforcement and Compliance Assurance Branch

### LIST OF EXHIBITS

- Exhibit 1        Map of Layout of Facility - Armco Middletown Works
- Exhibit 2        Map of the Approximate Location of SWMUs and AOCs  
                  at the Armco Plant, Middletown Ohio
- Exhibit 3        Map of AK Steel Facility, Landfill area
- Exhibit 4        4 Maps of Dick's Creek and landfill tributary -  
                  Historical PCB sediment sampling results:
- Exhibit 4.1        1999 Sampling Results
- Exhibit 4.2        1997 Sampling Results
- Exhibit 4.3        1995 Sampling Results
- Exhibit 4.4        1996 Sampling Results
- Exhibit 5        Map of Slag Processing/landfill area: Monitoring  
                  Wells Upgradient from Landfill South of Oxford  
                  State Road
- Exhibit 6        Summary Timetable of Required Actions



Lisa Geist 06/21/2000 11:37 AM

To: Joseph Boyle, Robert Guenther, Michael Mikulka  
Subject: SF action for sediment at Sauget site in southern Illinois

On May 31, 2000 the SF division issued a unilateral admin. order to Monsanto and Solutia for a time-critical removal action in an area called Dead Creek. I have an electronic copy of the entire UAO and Action memo. Basically, there are extremely high levels of PCB (up to 10,000 ppm) in the sediments, as well as other contaminants such as PAHs, metals, etc. These sediments pose a threat because of the high levels, the elevated groundwater table, and the area is prone to flooding (migration of contaminants downstream to affect residents, etc.). In the order, the PRP is required to remove sediments, etc. according to stream reach and 4 criteria. See below for selected text regarding the removal action.



select\_ paragraphs.

This site appears to be one that has been worked on a lot already, and is proposed for listing on the NPL. I think its a bit different situation than AK Steel (the highest levels of detected PCBs in sediments is only 64 ppm in comparison).

Also here is selected text regarding the potential threats  
**From the Action Memo:**

### III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at Sauget Area 1, Dead Creek and Site M present an imminent and substantial threat to the public health, or welfare, and the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP), Section 300.415, Paragraph (b)(2). 40 C.F.R. § 300.415(b)(2)(I), (iii), (iv), and (v), respectively, specifically allows removal actions for:

- A) Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain.

This condition exists at the Site due to the high levels of organic and inorganic contaminants found in the sediments and surface water of Dead Creek and Site M which is located in close proximity to local populations and could potentially be released into residential areas via flood waters caused by the shallow water table in the area and the presence of blocked or inadequately sized culverts. Some of the contaminants in Dead Creek are known carcinogens or suspect carcinogens. Contaminants present in Dead Creek and potentially migrating from Dead Creek via overflow and flood waters to nearby residential areas are accessible to humans, specifically the residents and children who live and play on these potentially affected properties. These individuals could potentially be exposed to the contamination by direct skin contact with the sediments, soils and surface water in or released from Dead Creek.

- B) Weather conditions that may cause hazardous substances or pollutants or





contaminants to migrate or be released.

This factor is present at the Site due to the fact high levels of organic and inorganic contaminants are located within the sediments and surface water of Dead Creek and Site M. Blocked and/or inadequately sized culverts on Dead Creek often cause flood waters to back up behind these culverts and then overflow into nearby residential areas. This area of St. Clair County is particularly prone to flooding due to a very shallow groundwater table. Storm water backing up behind culverts exasperates the flooding conditions in this area.



### 3. Work to be Performed

Respondents shall perform, at a minimum, the following response activities:

A) Prepare a Time Critical Removal Action Work Plan (also referred to herein as "Work Plan") and implement the Removal Action in accordance with the Work Plan to mitigate the threats posed by presence of contamination in Dead Creek sediments and certain adjacent soils and their potential migration via overflow and flood waters from the Site, as described in Section III, "Findings of Fact" of this Order. As more specifically described below, this Work Plan shall provide for: 1) the removal of materials from CS-B (creek sediments, creek bed soils and flood plain soils); CS-C, D, and E (non-native creek sediments only); and Site M (pond sediments and pond bottom soils) in Sauget Area One, while minimizing adverse impacts to area wetlands and habitat; 2) the proper handling, dewatering, treatment and placement of such materials in the on-site Containment Cell; 3) a plan for management of Dead Creek storm water; 4) the sampling and analysis of areas where materials has been removed, for the purpose of defining remaining contamination; 5) the placement of membrane liner material over

CS-B and in all other excavated areas where, based on post removal sample results, such liner is determined to be necessary; and 6) a design for the Containment Cell which will provide adequate protection to human health and the environment.

B) Respondents' Work Plan shall describe the implementation of the following actions, including associated implementation schedules:

#### 1. Sediment and Soils Removal Requirements

Respondents shall remove materials from CS-B (creek sediments, creek bed soils and flood plain soils); CS-C, D, and E (creek sediments only); and Site M (pond sediments and pond bottom pond soils) in Sauget Area One from Dead Creek and adjacent areas (collectively referred to as "materials") for disposal in the on-site Containment Cell. Such removal shall begin as soon as possible but no later than six months after the date of this Order. For the purposes of this Order, the approximate volumes of materials (both sediments and soils) to be removed and disposed of in the Cell are as follows:

CS-B and Site M contain an estimated volume of 25,500 cubic yards (cy) of metals and organic-containing sediment and soil:

CS-B sediment	2000ft L x 50 ft W x 2 ft D = 7,400 cy
CS-B creek bed soil	2000 ft L x 50 ft W x 1 ft D = 3,700 cy
CS-B flood plain soil	2000ft L x 100 ft W x 1 ft D = 7,400 cy
Site M sediment	64,000 sq ft x 1.6 ft = 3,500 cy
Site M pond bottom soil	64,000 sq ft x 1 ft = 3,500 cy

Total = 25,500 cy



CS-C, D and E contain an estimated volume of 24,400 cubic yards of metal and organic-containing sediment:

CS-C sediment	1400ft L x 50 ft W x 2 ft D = 5,200 cy
CS-D sediment	1200ft L x 50 ft W x 2 ft D = 4,400 cy
CS-E sediment	4000ft L x 50 ft W x 2 ft D = 14,800 cy

Total = 24,400 cy

The estimated volume of sediment and/or soil in CS-B and Site M is 25,500 cubic yards and CS-C, D and E contain an estimated volume of 24,400 cubic yards of sediment, a total of 49,900 cubic yards impacted sediment and soil. The above volumetric estimate for CS-B includes removal of one foot of creek bed soils and flood plain soils in addition to the sediments in CS-B. The estimate for Site M includes one foot of pond bottom soils in addition to the sediments. Only sediments are to be removed from CS-C, D, and E. In implementing such removal in CS-C, D and E, "sediments" shall be defined in accordance with the following criteria and procedure:

- a. Four objective criteria shall be used to identify "sediment" subject to removal, as follows: criteria (i)-(iii) shall be employed to make the determination in the first instance; if application of these criteria are not determinant, then criteria (iv) shall be used. The OSC shall have the authority to require the use of criteria (iv) at any time during the project. However, in any case, criteria (iv) shall be employed every 200 feet as a control on the application of criteria (i)-(iii).
- b. The four criteria:
  - (i) Origin – non-native vs. native sediments
  - (ii) Stratigraphy – sediments/soil boundary
  - (iii) Color – sediment color versus creek bottom soil color
  - (iv) Physical Characteristics
    - \* Unconfined compressive strength less than 500 pounds per square foot (psf)
    - \* Torvane shear strength less than 200 pounds psf
    - \* Moisture content greater than the liquid limit.
    - \* Moisture content greater than 60 percent

